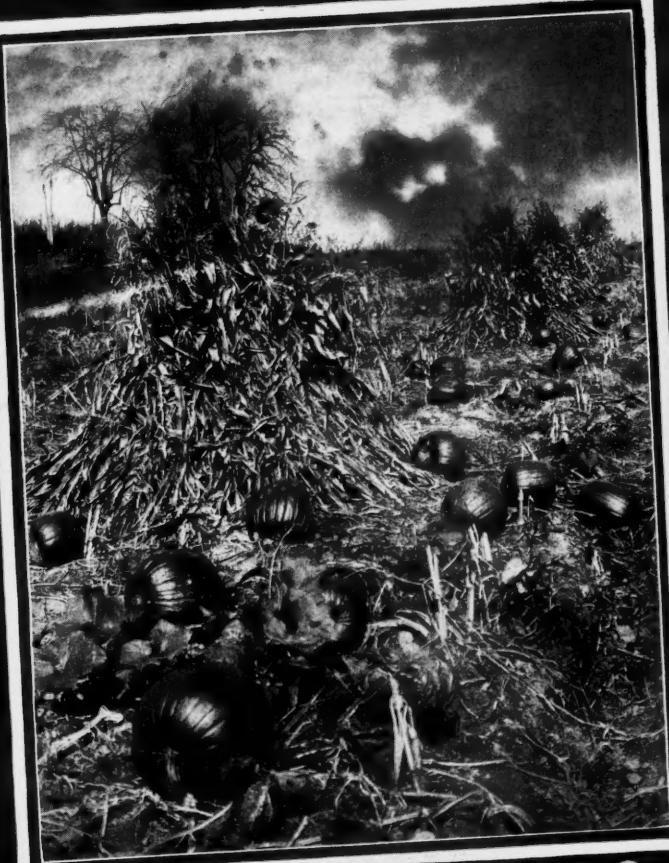


THE DENTAL DIGEST



NOVEMBER 1926

VOL. XXXII, No. 11

EDITED BY
GEORGE WOOD CLAPP D.D.S.
PUBLISHED BY
THE DENTISTS' SUPPLY CO.
CANDLER BLDG. TIMES SQUARE
220 WEST 42ND ST. NEW YORK

CHRISTMAS GOLD



RANKS have made Christmas Savings familiar to us all. For the dentist, there may be another Christmas Fund. By carefully husbanding your Gold and Amalgam scrap in the Fall and Winter, and sending it to us by December first, you will have a real Christmas surprise. Full value for Platinum group metals, as well as for Gold and Silver,—less a nominal analysis fee.

*Ship to your dealer
or direct to us.*

THE J. M. NEY COMPANY
HARTFORD ~~~~ CONN., U. S. A.

CONTENTS

VOL. XXXII

NOVEMBER, 1926

No. 11

CONTRIBUTED ARTICLES

	PAGE
Movable-Removable Bridgework	LOUIS A. UNGAR, D.D.S. 737
Nitrous Oxide and Oxygen in Exodontia,	ALLAN M. JOHNSON, A.B., D.M.D. 747
Oral Surgery in Practice	DR. JAMES L. ZEMSKY 750
Oral Sepsis With Relation to Systemic Disease,	LEONARD N. RAY, D.D.S. 758
President's Address Before the West Virginia State Dental Society,	H. L. SATTERFIELD, D.D.S. 762
A Patient Who Could Not Eat in Central Occlusion, E. S. ULSEY, D.D.S. 768	
Mouth Hygiene	CHARLES R. COLBERT, D.D.S. 769
Classification of Edentulous Cases	F. M. HIGHT, D.D.S. 772
Togo's "Discussions"	773
Dentist or Rhinologist	BOYD S. GARDNER, D.D.S. 776
Practising Dentistry in Mexico	HERMAN KULL, D.D.S. 777
The Better Dentistry Meeting (First District)	782
Dental Laws	ALPHONSO IRWIN, D.D.S. 783
DENTAL ECONOMICS	789
PRACTICAL HINTS	790
DENTAL SECRETARIES AND ASSISTANTS	794
EXTRACTIONS	800
DIETETICS AND HEALTH	801
FUTURE EVENTS	805
STATEMENT OF OWNERSHIP, ETC.	808



THE DENTAL DIGEST

GEORGE WOOD CLAPP, D.D.S., EDITOR

Published monthly, by THE DENTISTS' SUPPLY COMPANY OF NEW YORK, 220 West 42nd Street, New York, U. S. A., to whom all communications relative to subscriptions, advertising, etc., should be addressed.

Subscription price, including postage, \$1.00 per year to all parts of the United States, Philippines, Guam, Cuba, Porto Rico, Mexico, and Hawaiian Islands. To Canada, \$1.40. Great Britain and Continent, \$2.75. Australia, \$3.25. To all other Countries, \$1.75.

Articles intended for publication and correspondence regarding the same should be addressed EDITOR DENTAL DIGEST, Candler Bldg., Times Square, 220 West 42nd Street, New York, N. Y.

The editor and publishers are not responsible for the views of authors expressed in these pages.

Entered as Second Class Matter, at the Post-office at New York City, N. Y., January 29, 1909, under the Act of Congress, March 3, 1879.

OUR COVER THIS MONTH

A day set apart in this month of November, known as "Thanksgiving Day," is one of the long-established holidays of America, and on this occasion we are called upon to return thanks to Heaven for the health, happiness and prosperity of our nation. We have much to be thankful for, and this is fully recognized by our people, who believe that "the land of joy lies all before our eyes."

The celebration of Thanksgiving Day has become one of feasting, and is never quite at its best save on the farm. "When the frost is on the pumpkin and the fodder's in the shock!" Those of us who have memories of Thanksgiving spent on the farm can see in this picture something more than shocks of fodder and a few pumpkins. In reality, the dishevelled appearance of the landscape is just a field view of certain end products of the harvest season—materials for "pumpkin" pie and good corn to fatten up the turkey. And as we can point with pride to all sections of the country for similar conditions, we may gladly offer up thanks for our bountiful share of the good things of life.

Dioxogen

The pain and soreness following extraction, and the discomfort incident to plate adjustments are very greatly relieved by DIOXOGEN, and what is more important—injured tissues are protected against infection.

DIOXOGEN acts almost as an anesthetic in the mouth: the relief from pain and the soothing effect on the tissues are so pronounced that the intervals between office visits can be materially shortened.

In Pyorrhea cases the destructive action of DIOXOGEN on pus is of signal assistance; it clears the field and at the same time removes one of the chief sources of reinfection.

Absolutely harmless, DIOXOGEN is safe to entrust to patients.

*A sample will gladly be sent to
professional men on request.*

THE OAKLAND CHEMICAL CO.

59 Fourth Avenue

New York, N. Y.

THE DENTAL DIGEST

Vol. XXXII

NOVEMBER, 1926

No. 11

Movable-Removable Bridgework

BASED ON EIGHT YEARS' EXPERIENCE IN THE APPLICATION OF THE
CHAYES TECHNIC

By Louis A. Ungar, D.D.S., New York, N. Y.

In advocating the principle of the Chayes movable-removable bridgework I can truthfully state that my position is an entirely unbiased one. I have not taken the prescribed course for the Chayes technic, but I have practiced and observed the results from this method of treatment independently. After twelve years of experience with all types of bridgework, and eight years with the Chayes type in particular, I do not hesitate to affirm that I consider movable-removable bridgework the acme of present-day dental practice. This is not the haphazard idea of a theorist, but it is the definite result of actual experience, represented in more than 500 finished cases in which Chayes bridgework was constructed.

PHYSIOLOGIC CONSIDERATIONS

Certain fundamental considerations that underlie the application of the Chayes system require discussion. First, there is the question of the independent motion of the teeth. Under natural conditions each tooth has its independent position in one socket, its independent blood and nerve supply, and its independent motion. That is what we learn from the study of the normal skull before any of the teeth are missing.

The blood supply of the tooth is a matter of prime importance. As Chayes has aptly remarked, "Blood is ourselves in solution." Everything needed for the local nutrition of the tooth comes by way of the tiny arteries in the dental pulp. All else being equal, the tooth with a healthy blood supply stands a much better chance of survival. Of course, there are other factors at play, but the blood supply is a most important one.

The importance of the blood supply in the nutrition of the teeth has been well exemplified by the powerful influence of systemic conditions, endocrine disturbances and dietary deficiencies on the health of the denture.

Of late years, attention has been focused on the diet as an important factor in the development of sound or unhealthy teeth, as the case may be. The fact that dental decay is so universal in vitamin-deficiency diseases, especially rickets and scurvy, has opened up a new field for study. Marshall¹, summarizing this aspect of dental caries, points out some of the experimental data on the anatomic changes occurring in the teeth as the result of insufficient diet and suggests a possible relationship between certain salivary constituents, which either predispose to or inhibit dental decay. Toverud² has demonstrated some of these changes in the teeth of scorbutic animals by means of histologic studies and has also shown that the chemical picture is altered. He found a marked decrease in total ash and calcium and a marked increase in magnesium. Toverud's studies showed that it is possible to produce chemical changes in a fully formed tooth by changing the diet. Recently, McCollum, Simmonds and Becker³ have shown that not only dietary deficiencies but also the inclusion of excessive quantities of certain chemical elements may predispose to dental decay. In their experiments on rats they found that the inclusion of small amounts of fluorids in the diet led to definite abnormalities in the structure and hardness of the teeth and to an unusual susceptibility to attrition.

Chayes bridgework improves the blood supply of the abutment teeth and brings about a healthy condition of the surrounding gums. This contention has been abundantly proved by repeated observations. For example, I had a patient with only three teeth in the mouth, two of which were loose. After appropriate local treatment and the wearing of a Chayes bridge, these teeth became perfectly tight. No other type of bridgework will accomplish this result. The motion and constant massage effected by this type of bridgework are distinctly beneficial to the nutrition of the abutment teeth.

Sometimes two or more natural teeth are fused, but under such conditions the patient usually begins to suffer from neuralgic pains and extraction becomes necessary sooner or later. Fused teeth, even without cavities, are prone to give rise to disturbance.

It appears almost trite to state that the type of artificial denture that most nearly approximates the natural one is the best, but many of the irreconcilable adherents of fixed bridgework have in substance denied this almost self-evident proposition. It has even been urged that nature herself is not perfect with regard to formation of the

¹ Marshall, I. A.: *The Etiology of Dental Caries*, *Physiol. Rev.*, 4:564, Oct., 1924.

² Toverud, G.: *The Influence of Diet on Teeth and Bones*, *Jour. Biol. Chem.*, 58:583, Dec., 1923.

³ McCollum, E. V., Simmonds, Nina, and Becker, J. E.: *The Effect of Additions of Fluorine to the Diet of the Rat on the Quality of the Teeth*, *Jour. Biol. Chem.*, 63:553, April, 1925.

denture. The latter statement is unquestionably true; nevertheless nature makes a much better denture than anything dentistry has to offer.

The ideal aim of dentistry is the conservation of the natural teeth, not their replacement. Under present conditions, however, the loss of a certain number of teeth is unavoidable. The soft, mushy diet of civilized man, the prevalent habits of neglect of the teeth, accidents, slipshod and superfluous dentistry, all contribute to make the replacement of missing members an unfortunate but necessary evil.

It is our prime duty as dentists to instruct our patients properly in order that the loss of teeth may be prevented. In the majority of cases this loss is preventable, being due to ignorance or neglect. The campaign now being carried on by the dental profession for this purpose is already accomplishing much in efficient prophylaxis. However, when replacement of teeth becomes necessary, it should be brought about in a manner that is as nearly natural as conditions will permit.

In the construction of Chayes bridgework I have yet to find a case in which it was necessary to destroy the pulp in order to make the inlays in the abutment teeth. As a matter of fact, there is no type of bridgework in which there is less damage to the abutment teeth. In my experiences the clasps of the ordinary removable bridge are much more injurious to the abutment teeth than the inlays. In the pin type of bridge the pulp is more often endangered.

In certain pyorrheal conditions Chayes bridgework stimulates the gums and thus tightens the teeth. This beneficial result is brought about largely by the saddle of the bridge, which gently massages the gum tissue every time the patient bites. The saddle, of course, may be removed and cleaned.

Let me cite a case to bear out the contention that Chayes bridgework actually improves the condition of the abutment teeth. The patient was cachectic and had pyorrhea. The mouth was in a frightful condition. The gums were blue and turgid. After removal of the tartar and systematic finger massage, the mouth was restored to a fairly healthy condition. But there was a distinct difference in the local condition of various parts of the mouth. In some places the teeth and gums were healthy, in others the teeth were loose and the gums spongy. In this case the effect of Chayes bridgework on the abutment teeth was an object lesson. These teeth had become firmer than those that were not connected with the bridge, and their surrounding gum area also was in a much healthier state. When one observes a number of cases such as this, one cannot escape the conclusion that the movable-removable bridge, by its constant massaging effect on the abutment teeth and their adjoining gingival areas, not only does less damage to these teeth than any other form of artificial denture, but

actually improves them. And the factor that brings about this benefit is unquestionably the stimulation of the local blood supply.

MOBILITY OF THE TEETH

The normal tooth enjoys a considerable degree of normal mobility in the jaw; otherwise the jar resulting from mastication would be terrific. As the tooth lies in its bony socket, it is separated from the bone itself by an elastic membrane, which serves as a resilient cushion. The fibers that compose this elastic membrane are distributed in all directions around the tooth and interlace freely with the periosteum and gum tissue. During mastication this elastic membrane takes up the stress of the impact and, as a result of this continuous massage, brings about an increase in the local blood supply.

According to Chayes⁴, the rhythmic undulations of the elastic membrane of the tooth during mastication are essential to dental nutrition. Certain conditions in the mouth may bring about an interference with these rhythmic undulations and thus prevent proper blood supply to the tooth. The presence of food debris, overhanging fillings and ill-fitting crowns may inhibit this motion, as Chayes has pointed out.

Ill-fitting bridges—fixed or removable, but particularly fixed—are potent factors in inhibiting the undulations of the elastic membrane. Any crown that extends away from the gingival circumference of the tooth or any piece of bridgework that allows food debris to be retained or exerts unequal pressure upon the alveolar ridge or fails to restore occlusion may inhibit this important function.

Any organ, whether it be a tooth or an arm, requires exercise or it will waste away. If an arm is put up in a plaster cast and left alone for six weeks or so without massage or motion of any sort, what happens? The muscles of the arm atrophy, the joints lose their mobility, and the circulation becomes definitely sluggish and below par. The nutrition of the entire arm from shoulder to fingers suffers to a definite degree.

The same principle obtains with regard to the teeth. The tooth is a mobile organ. Its form and function are such as to adapt it to independent motion. When two abutment teeth are saddled with some form of appliance that prevents independent motion, such as the fixed bridge, the result is inevitable. The teeth are in the same predicament as the arm immobilized in a plaster cast, and they suffer the same fate. With the loss of mobility their blood supply is proportionately reduced and the nutrition of the tooth and its resistance to infection suffer.

We have all observed the penalty the abutment teeth must pay in

⁴Chayes, H. E. S.: *Movable-Removable Bridgework*, Chayes System Lab., New York, 1922.
Ibid.: *The System of Movable-Removable Bridgework in Conformity with the Principle That "Teeth Move in Function,"* Dental Rev., 31:85, Feb., 1917.

fixed bridgework. To my mind, their proneness to decay and lowered resistance to infection are the result of insufficient blood supply and loss of independent mobility.

A cardinal rule to remember in the construction of bridgework is that the mucous structures should carry the stress. The teeth that support the bridge should be expected simply to prevent its vertical displacement during mastication and so interplay with the bridge as to be kept from migrating into an abnormal position. Other than these two desiderata, the abutments have no requirements. During mastication the bridge should ride gently upon the alveolar ridge. These requirements for an artificial partial denture are best met by means of a *Chayes bridge*.

POINTS IN TECHNIC

The minute details of the technic of the Chayes system of bridgework will not be described in this article. For a consideration of this phase of the subject the reader is referred to Chayes's⁴ communications.

The construction of Chayes bridgework is not more difficult than that of any other type, if done properly. It requires patience and strict attention to detail, but not extraordinary skill. Most of the failures are due to slipshod dentistry. Any other type of bridgework would fail if handled with the same degree of negligence. Any competent dentist who is willing to give the subject proper study should be able to master the details of the Chayes technic.

The preparation of the abutment teeth for the inlays must be very carefully performed. This work cannot be hurried. One should never devitalize the tooth for the purpose of making the inlay, nor is it necessary to touch the pulp at all. The inlays are cemented in the abutment teeth.

A wax bite and a plaster impression are taken to show the relationship of the abutment teeth. In many cases dentists fail to make this impression large enough, with the result that the relationship to the remaining teeth is not shown. The impression should include at least half the mouth. It should be varnished and a model made and articulated to the wax bite.

Sufficient metal should be cut out of the inlays to house the female attachments. The female attachments are soldered in place in the inlays. These attachments must be absolutely parallel. In order to secure this parallelism, two instruments, the parallelometer and the parallelodrill, are used. A lack of parallelism in the attachments will result in undue stress on the abutment teeth. If the attachments are not absolutely parallel, they must be removed, replaced and resoldered. In the mechanical construction of a bridge it is essential to remember

that the artificial partial denture must fill the edentulous space without bringing any stress whatever to bear upon the abutment teeth.

With regard to the preparation of the bridge itself, the artificial teeth are ground in, the saddle cast, and the male attachment soldered onto the bridge. The saddle should be firmly seated in place. It should not be too small in the upper jaw nor too large in the lower. It should not lie too close to the roots of the teeth, lest it irritate the area around them. The artificial partial denture is then finished and polished.

When there are no posterior abutment teeth, the metal saddle of the bridge should dip down snugly and take in the entire condylar fossa, as shown in Figure 1.

This type of work can be made extremely beautiful, much more so



Fig. 1.

The Chayes bridge used in Case 1 set in place in the model of the jaw. Note the extra saddle carrying the left canine tooth. This saddle is controlled by a set screw and serves as a stress-breaker for the protection of the left abutment tooth. Note also how the posterior extremity of the metal portion of the bridge dips down into the condylar fossa. This is an important mechanical detail when there are no posterior abutment teeth.

than any other type of bridgework. In other types of bridges some gold is visible, but in the Chayes bridgework no metal at all can be seen. The cosmetic result is the best that can be attained with any system of dentistry and is extremely gratifying to the patient.

By referring to Figure 2, the reader will note little black lines stained on the crowns of the artificial teeth. This discoloration was made to imitate the tobacco stains present on the natural teeth.

In Figure 3, one may readily see how the natural color and contour of the gum may be simulated in this type of bridgework. If the artificial teeth are properly stained with pink porcelain, they will take

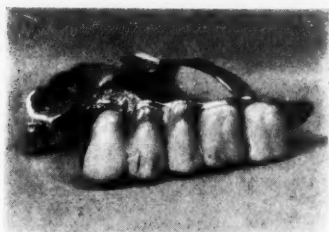


Fig. 2.

The Chayes bridge used in Case 1. Note how the tobacco stains present on the natural teeth have been imitated by the black lines on the artificial crowns.



Fig. 3.

The artificial partial denture used in Case 2. By the use of pink porcelain on the artificial crowns the natural appearance of the gums was closely copied.

the appearance of the natural gum and the patient may smile without revealing the fact that he has "false teeth."

REPORT OF CASES

I could report very many cases in which highly satisfactory results have been obtained with Chayes bridgework. However, the following three cases will suffice to show what may be expected when the work is performed carefully:

CASE 1

M. C., male, aged 48, had only five anterior teeth in his upper jaw, the incisors and one canine. He had been advised to have these teeth extracted and a complete plate fitted. The right third molar also was present when I first saw him; but as there was an alveolar abscess with bone absorption, it had to be extracted. The movable-removable bridge used in this case is shown in Figures 1 and 2. By staining the artificial crowns so as to imitate the tobacco stains on the natural teeth, I was able to obtain an excellent cosmetic result.

As there were no posterior abutment teeth in this case, it was necessary to extend the saddle of the bridge deep down into the condylar region (Fig. 1). Furthermore, in order to guard against undue strain on the lateral incisor which was used as an abutment, a stress-breaker was employed in the form of an extension of the saddle from the first bicuspid controlled by a set screw. This allowed extra play, so that any stress brought against the posterior teeth would not exert its full force against the lateral incisor, but would be distributed equally across the saddle of the bridge to the opposite abutment tooth.

When the patient came to me, the two teeth used as abutments were loose but vital. They were treated and the Chayes bridge was used. This artificial partial denture proved distinctly beneficial. Today,

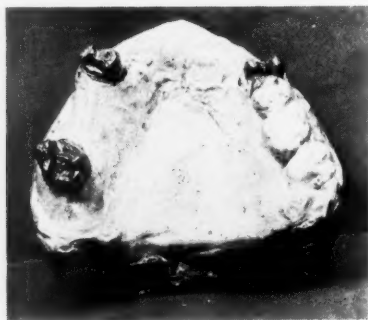


Fig. 4.

A model of the abutment teeth prepared for inlays in Case 2.

two years later, the abutment teeth are firm and healthy and the whole mouth is in excellent condition. The patient states that his mouth was never in better shape than it is now, and that he masticates with greater comfort than ever before during the last twenty years.

CASE 2

J. L., female, aged 39, presented with a fixed bridge, which was shaking in her mouth. She had worn it for two years. She had gold crowns on the upper left first bicuspid, the upper right first bicuspid and the upper right second molar. It seemed that it would be necessary to extract the upper right first bicuspid, but, after removal of the bridge and massage of the gum, this tooth became firm. A Chayes bridge was constructed, as shown in Figure 3. By using pink porcelain on the artificial teeth I was able to imitate the natural appearance of the gums closely. Three teeth were used as abutments, as shown in Figure 4.



Fig. 5.

A model of the natural denture in Case 3, with the abutment teeth prepared for inlays.

The wearing of the movable-removable bridge proved of distinct benefit. Twenty-two months later, when the patient took her routine prophylactic treatment, all her teeth were firm and healthy. The abutment teeth had been improved by the wearing of the bridge.

CASE 3

F. F., female, aged 50, presented with only four teeth and a clasp bridge in her mouth. The condition of her denture is illustrated in Figure 5. Three of the teeth, though vital, were so loose that I almost despaired of saving them. They had large cavities, due to the friction of the clasps, and they were so sensitive that touching them caused

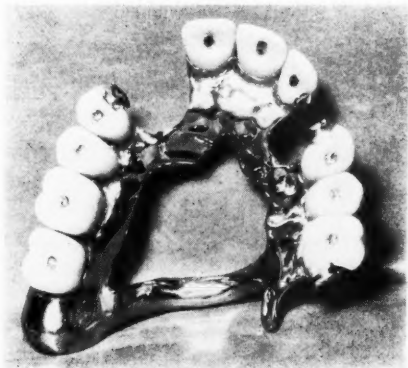


Fig. 6.

The Chayes bridge used in Case 3. The male attachments, which set in place in the female attachments soldered in the inlays, are plainly visible.

intense pain. It was necessary to prepare the inlays under novocain. Figure 5 shows the appearance of the inlays in the three abutment teeth. Figure 6 shows the bridge constructed. In Figure 7 the bridge is shown set in place in the plaster cast of the jaw. This picture shows how the normal appearance of the gums may be copied by staining the crowns with pink enamel.

Today the abutment teeth in this case are firm and healthy and the whole mouth is in good condition.

CONCLUSIONS

1. As normal teeth move in function, any type of bridgework that most closely approximates this mechanism is most natural, and therefore best.



Fig. 7.

The Chayes bridge used in Case 3 set in place in the plaster model.

2. An unimpaired blood supply is a prime requirement, if the abutment teeth are to withstand the extra stress. Fixed bridges and, to a less extent, removable clasp bridges inhibit the normal blood supply of the abutment tooth. The Chayes bridge, on the contrary, increases it.

3. The application of Chayes bridgework does not require extraordinary skill, only patience and attention to detail.

4. After all, results count for more than theories. Therefore three illustrative cases are cited to show the beneficial results that follow the wearing of movable-removable bridgework. I have not cited these three cases as a few isolated examples with successful results. They belong to a group of more than 500 completed cases, and they typify the outcome which, according to my experience, may be expected in any similar case.

5. In my opinion, movable-removable bridgework represents the acme of dental practice for the replacement of missing teeth.

156 West 86th Street.

Nitrous Oxide and Oxygen in Exodontia

By Allan M. Johnson, A.B., D.M.D., New York, N. Y.

For a great many years anesthetics have been used for the extraction of teeth, chiefly in the form of nitrous oxide without the addition of oxygen. This method was more or less unsatisfactory, as the operating time was limited and the administration of the gas alone was apt to be decidedly unpleasant. Hewitt of England, I believe, was the first to experiment clinically with the admission of definite percentages of air. Then came the use of oxygen and the refinements in apparatus, so that a definite mixture of the two gases could be administered.

At the same time novocain had been produced in Germany and the instrumentarium and technic of injection perfected, so that now the exodontist has two methods to choose from: (1) general anesthesia, with nitrous oxide and oxygen, and (2) local anesthesia, with novocain. Both methods have their advocates, and many arguments have been put forth in favor of one method over the other.

Of course, the first factor to be considered is the patient. Some people have a horror of being rendered unconscious; others do not want to know what is being done to them. Some, from physical causes, are a poor risk for gas anesthesia, while others develop idiosyncrasies to novocain. All operations should be performed for the best interests of the patient, and the operator who allows his personal inclination to interfere in any way with the welfare of his patient, either physically or mentally, is, in my opinion, guilty of malpractice.

All things being equal, nitrous oxide and oxygen should be used in all cases of extraction. When properly administered, this method gives a smooth, tranquil anesthesia, which can be prolonged at will. The feelings of the patient can be disregarded completely as to sounds and sights. If a tooth is broken off, there is no shock to the patient and no need for explanations. Nor has the patient any idea as to the length of time an operation has consumed. Consequently he takes away with him no impressions, however erroneous, of unnecessary delay or clumsiness on the part of the operator.

There is generally a certain amount of pain and discomfort after a severe extraction. How many times has the dentist made an injection, extracted a tooth successfully, sent the patient home, and then in half an hour or so received a telephone call saying that the patient was suffering and would have to have something done at once! This was, of course, due to the wearing off of the effects of the anesthesia, and sometimes it meant that the patient must return to the office or the dentist must go to the house. Also, when the adrenalin has been

absorbed, there is an increased flow of blood to the socket, and the greater amount of bleeding frightens the patient.

With nitrous oxide the picture is entirely different. In five or ten minutes after the extraction the patient knows just where he stands. At that time he is generally at the height of his discomfort, and if the pain is intense or the bleeding excessive, measures may be taken at once to alleviate the condition.

With the use of novocain, no matter how skillful the injection, there is sure to be a certain amount of added after-pain and soreness. One cannot introduce two c.c. of a foreign substance into the tissues without causing a reaction. And not infrequently patients who have had novocain once refuse its further use because of this and the added discomfort caused by the insertion of the needle.

In cases of acute and extensive inflammation it is sometimes a dangerous procedure to use novocain, and in a great many cases where it has been used the healing of the wound and clearing up of conditions have been greatly delayed.

Brophy, in his book *Oral Surgery*, page 192, says: "In the remarkable work being done by Crile, the use of local anesthetics has been given a broader and more useful place in surgical practice. In surgery of the mouth, it is very difficult to obtain the same results that Crile has reached in general surgery. Personally, I prefer a general anesthetic, which I believe can be employed with greater safety in a large number of cases. Besides, the reaction in the location of the injection sometimes seriously interferes with the end result, whereas, in the use of a general anesthetic, the part to be operated upon is not affected thus and, consequently, surgical success is more reliable. This in itself favors the use of a general anesthetic."

Gibbs of Edinburgh, in his book on *Extraction of Teeth*, page 126, says: "Another factor in the production of necrosis is the prevalent use, or rather misuse, of hypodermic injections for the production of analgesia. Surgeons who have had a large experience of injection analgesia tell me that, on the average, operation wounds after using an analgesic do not heal so quickly or so certainly as they do when either a general anesthesia has been used or none at all.

"This applies to parts involving soft tissues only, and one occasionally finds that even in such favorable circumstances as these the wound opens out in a week or ten days, without any evidence of sepsis—a result simply of lowered vitality induced by the injection. This being so in soft tissues and under aseptic conditions, it is not to be wondered at that delayed healing and even necrosis and sloughing should occur, when the hypodermic injection is intended to render bone as well as soft parts analgesic, and when the operation is performed in a locality where it is next to impossible to maintain asepsis."

These opinions cannot be disregarded. The great objection to nitrous oxide and oxygen, aside from the one of cost, is the fact that rendering a person unconscious is rather a serious proposition. If the dentist fails to get a satisfactory anesthesia with novocain, probably no harm has been done. But if he makes a slip with a general anesthetic, there is apt to be trouble—and serious trouble at that!

Furthermore, the technic of local anesthesia can be learned from textbooks, and the first actual experiments on the human subject are not likely to be terrifying.

One should, of course, study the theory of nitrous oxide anesthesia, but no amount of reading will fit a man to administer it. Practice is essential, and practice under the guidance of an experienced anesthetist. This fact caused a great deal of disappointment to those dentists who bought gas machines after a demonstration by a salesman, thinking that its use would be very simple. The majority of them were doomed to failure.

In the hand of an expert, nitrous oxide and oxygen anesthesia is the ideal method for extraction. With a little time and patience the majority of dentists can become proficient with this anesthetic and secure far better results, with more satisfaction to their patients, than by the use of novocain.

220 West 42d Street.



Oral Surgery in Practice*

By Dr. James L. Zemsky, New York, N. Y.

Attending Surgeon, Department of Oral Surgery; Chief of Clinic and Director,
Surgical Periodontia Department, Midtown Hospital, New York

Foreword

The present offering is an outcome of a number of years' experience in teaching oral surgery to postgraduate students. During this period the writer has observed that there is a large number of men among the practitioners taking postgraduate work who strongly dislike the academic method of instruction. On the other hand, it has been convincingly shown that these same students become deeply interested in the subject when for the academic method of teaching there is substituted a course of practical instruction in oral surgery which consists of a consideration of clinical cases, and in connection with which a discussion reviewing the most common surgical diseases of the mouth is conducted.

Such a course of practical instruction in oral surgery offers an opportunity to postgraduate students to acquire a fair understanding of these lesions, which is essential for the correct handling of patients. Furthermore, since almost every practitioner comes in contact with oral surgical cases, his reputation, to a certain degree, depends upon such knowledge. All this explains the reason why even those practitioners who are so fully occupied in their practice that little or no time at all is left for anything else are still much interested in *practical oral surgery courses*.

A survey of the literature on surgical lesions of the mouth and allied subjects reveals that there are already in existence several valuable books dealing with this subject, but none of these is arranged in a form readily available to the busy general practitioner and consequently they are of little interest to him. It has been noticed that those postgraduate students who have been at times referred to any of the treatises on oral surgery have frequently complained that even the reading of these works requires much more time than they have at their disposal, and that a great deal of material therein presented is practically of no value to them. To the writer's mind this clearly indicates an existing need for a different kind of work on oral surgery, one that would deal more fully with the clinical aspect of the subject and which would treat it in a concise and simple manner, i. e., an *entirely practical* book, somewhat similar in character to the *practical oral surgery courses*, which have proved of inestimable value to the

* This series of articles will be published later in book form.

practitioner. With this idea in mind, and partly in response to repeated solicitations of the many practitioners whom it has been the writer's pleasure and privilege to instruct, this work has been undertaken.

To prepare material on oral surgery to serve for ready reference, by which the busy practitioner may be guided in his daily work, has necessitated the following departure from the usually employed methods of preparing an *academic* work on this subject. Nearly everything of a theoretical nature has been omitted; detailed description of operative technic has been avoided; crowding of pages with a text requiring insistent study has been eliminated. These changes have resulted in a series of articles whose distinguishing features are: (1) the employment of brevities, i. e., suggestions, tips and hints, by means of which an attempt has been made to cover the most important phases of oral surgery and its general practice, and (2) a presentation similar to a "case method of teaching," for which purpose many photographs and roentgenograms of actual clinical cases have been used.

In conclusion, the author wishes to state that in writing these articles he has had in mind the wants of the busy practitioner, and that it has been his conscientious endeavor to meet what he thinks is, at the present time, a genuine need.

Examination

¶1. Examination of a patient begins the moment he enters the operating or examining room. His general appearance and gait should be noted as he walks toward the chair. The color and condition of the skin, face, lips, ears, neck and hands should be carefully observed. This, together with the expression of the eyes, offers valuable information.

¶2. When an operator fails to wash his hands, leans unnecessarily over the patient, presses needlessly with the mouth mirror on the lips, gums or cheeks, lets his instruments slip too often, "jabs" into the gums, throws around cotton applicators or gauze sponges and wears a soiled white coat or gown, he runs the risk of having some of his patients seek thereafter a doctor who is more careful and tidy, even if less skillful.

¶3. Probes are often found to be of inestimable value in clinical examination. By their use presence of calculi in the salivary duct, communication with the antrum, the course of fistulous tracts and the condition of bone in regions discharging pus may frequently be determined. (See Figs. 1-4.)



Fig. 1

Roentgenogram showing a probe entering the antrum. The probe is inserted into the socket of an extracted tooth to determine whether a communication with the maxillary sinus exists. (See *3.)



Fig. 2.

Roentgenogram showing a probe introduced into the Stenson's duct of a patient presenting a swelling of the parotid glands, in which case presence of salivary calculi was suspected. Without meeting any resistance the probe passed into the parotid gland, thereby excluding the possibility of the presence of salivary calculi within the duct. (See *3.)



Fig. 3.

Roentgenogram of a patient presenting an obstruction of Stenson's duct. It shows a probe inserted into the duct for determining the presence of any foreign body.

In using probes for examination purposes, care must be exercised not to use them too forcibly. The probe shown in the roentgenogram above had been forced into tissues surrounding the duct. (See ¶3.)



Fig. 4.

Roentgenogram showing a probe entering the submaxillary gland, in which a foreign body is clearly seen. The grating which is felt while probing makes the diagnosis of the presence of a stone easy. (See ¶3.)

¶4. Examination of the oral cavity should include a general survey of the mucous membrane of the lips, cheeks, palate, back of the throat, floor of the mouth and the tongue, as well as a careful investigation of the condition of the teeth and their supporting structures.

¶5. It is a good practice to cultivate patience and tolerance in listening to the patient's complaints most attentively.

¶6. In ignoring the patient's complaints, and too often attributing

them to neurasthenia, one runs the risk of losing the patient's faith. There are not many neurasthenics, and still fewer "cranks," therefore it is best that all patients should be given the benefit of the doubt.

¶17. Rubber dam, ethyl chloride, electric pulp tester, good light, clear mirrors, tongue depressors and probes should constitute a part of one's examination outfit, which is incomplete unless a stethoscope and a sphygmomanometer are included. The more frequently these are used, the better chance has an operator to make a thorough examination and arrive at a correct diagnosis.

¶18. Good radiographs, together with reliable laboratory reports, including blood count, coagulation and bleeding-time tests, Wasserman reaction and urinalysis, are indispensable in diagnostic examination. The surgeon who gets along "just as well" without these often stakes his reputation, for not infrequently do patients turn to other practitioners who thoroughly examine them, taking advantage of all diagnostic means available, and thus disclose the "bad breaks" of the snap diagnostician.

¶19. When palpating growths, much care should be taken to exert as little pressure as possible, for repeated careless palpation of a cancerous growth has been known occasionally to cause metastasis.

¶20. Often examination of the normal side corresponding to the one which is affected is very helpful, for the existing symmetry or asymmetry of the parts may serve as an important aid in an effort to arrive at a diagnosis.

Roentgenology

SCAR AND SCLEROSED BONE

¶11. The structure of sclerosed or scar bone often presents on the x-ray films an appearance resembling that of a root or a tooth. It is therefore well to bear this in mind in diagnosing such conditions. (See Figs. 5-11.)

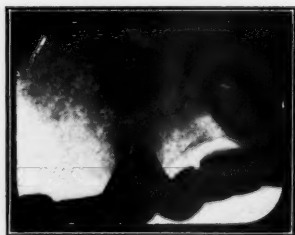


Fig. 5



Fig. 6



Fig. 7



Fig. 8



Fig. 9



Fig. 10



Fig. 11

Figs. 5-11

Radiograms reproduced in Figures 5-11 disclose radiolucent areas representing sclerosed or scar bone which is filling in the areas of bone previously destroyed through infectious processes.

The areas of sclerosed bone, as shown in these x-ray pictures, vary in size and shape, resembling roots, root apices and teeth. In diagnosing, these radiopaque areas must not be confused with retained roots or unerupted teeth. (See ¶11.)

FRACTURED ROOTS

¶12. Resorbed roots and alveolar bone not infrequently appear on the radiogram as a fracture, hence one should be careful not to make a diagnosis of a "fracture" from an x-ray only. History and clinical findings also must be considered. (See Figs. 12-13.)



Fig. 12



Fig. 13

Fig. 12

Roentgenographic examination of two maxillary centrals reveals destruction of the alveolar ridge and incomplete root-canal fillings. It shows also an *oblique radiopaque line across the apical third of the root of the left central, which was diagnosed as a fracture of the root*. Operative findings did not confirm the diagnosis of a fractured root, but disclosed that the lingual aspect of the root was merely resorbed, simulating a fracture on the x-ray film. (See ¶12.)

Fig. 13

An x-ray of the tooth diagnosed from the x-ray shown in Figure 12 as being fractured. The diagnosis is obviously wrong, since no fracture is shown on the x-ray of this tooth after it was extracted. It is necessary to obtain a careful history before a diagnosis of a fracture is made. To rely on x-ray findings at this time is not safe. (See ¶12.)

LOOSE ROOT FRAGMENTS

¶13. Regardless of how small or how loose a retained root fragment may be (even when it is practically exfoliated), an x-ray is indicated before a diagnosis is made, for in a large number of cases there is serious trouble hidden beneath innocent-looking structures. (See Figs. 14-17.)



Fig. 14



Fig. 15



Fig. 16



Fig. 17

Fig. 14

Roentgenogram of the region of the left maxillary first premolar, where a loose root was present, reveals a radiolucent area representing a cyst involving the adjoining canine. (See ¶13.)

Fig. 15

Roentgenogram of the region of the maxillary left premolar presenting a very loose fragment and revealing a malposed unerupted premolar. (See ¶13.)

Fig. 16

Roentgenogram of the region of the left superior canine, premolar and molar, presenting a very loose, retained fragment of a root, reveals an extensive radiolucent area representing a cyst involving all the teeth shown on the x-ray film. The conditions shown in Figures 14-16 cannot be correctly diagnosed without a radiographic examination. (See ¶13.)

Fig. 17

Roentgenogram showing condition similar to the one in Figure 15. (See ¶13.)

(To be continued)

355 East 149th Street.



Oral Sepsis With Relation to Systemic Disease*

By Leonard N. Ray, D.D.S., Altoona, Pa.

The discovery of the relationship which frequently exists between various chronic infections and systemic diseases marks a decided advance in therapy and medical science. There is quite often a relationship between infected gums, in the form of acute ulcerative gingivitis, pyorrhea alveolaris or alveolar abscess, and systemic disorders, necessarily involving problems of immunology, bacteriology and pathology.

Oral sepsis is not exactly a recent discovery. For decades physicians have noticed evidences that some acute, inflammatory lesions give rise to serious systemic disturbances. However, the most recent findings of Vaughn, Payne, Rosenow, Billings and others disclose the fact that, although little and apparently innocent infections may create a small amount of local disturbance or none at all, they often become the source of serious systemic disease.

To Dr. Benjamin Rush belongs the credit for associating diseased conditions of the teeth with systemic disturbances. He reported a case of a lady suffering from rheumatism, who had an infected tooth and a toothache. Thinking that there might be some relation between these two conditions, he advised the patient to have the tooth extracted, which was done, and she was relieved of rheumatism in a few days. This happened in 1801. Thus we see that quite some time ago oral sepsis was recognized as a contributing factor to systemic disturbance.

In bygone days this relationship between defective teeth and ill health was attributed entirely to tooth caries. It seemed to be apparent that teeth so rendered unfit for masticatory function might cause digestive disturbances through the infection of food by the caries during the process of mastication, as well as through putrid food matter from the caries and pus from diseased gums being swallowed.

Food material putrid from caries, pus from pyorrhea pockets and poorly masticated food apparently have but slight untoward effects upon systemic ills, since, as a matter of fact, the mucous membrane of the gastro-intestinal tract in a healthy condition can tolerate much abuse and destroy the septic material when swallowed. In otherwise healthy individuals serious effect of oral sepsis rarely results through the alimentary tract.

It is recognized that an infection spreads from a chronic focus in three ways: (1) by direct extension to immediate tissues; (2) by passing along serous or mucons surfaces; and (3) by metastatic in-

* Read before the Blair County Medical Society, Pennsylvania.

fection of distant organs by means of the blood and lymph. Oral sepsis as a source of metastatic infection is quite important. Although it may not be so apparent as diseased tonsils or arthritis, yet it may be the seat of a focus of infection.

Systemic infection caused by oral sepsis is frequently far-reaching and may be chronic and insidious in its attack. Pathologic changes are occasionally very severe and low in grade before they are noticed clinically, and for this reason corrective treatment of oral sepsis does not always bring the desired relief anticipated.

Frequently the patient gains immunity against these chronic infections and is able under normal conditions of life to keep them localized. However, the invasion of blood and the spread from these chronic foci quite often occur when the patient's normal body resistance is lowered by digestive disturbances, fatigue, pregnancy and lactation, diabetes, anemia, exposure, acute and chronic infections, excessive indulgence of alcohol, etc.

Organisms harbored in chronic foci of infection, as alveolar abscesses, are kept local the greater part of the time. Yet they may often find the body defenses below normal and, having the ability to multiply rapidly when opportunity presents, they invade the blood stream and lodge in distant tissues.

Streptococcus viridans is found more frequently in deep pyorrhea pockets and alveolar abscesses than are some other organisms, and their number usually predominates. Possibly for that reason the streptococcus group appears as the most important in metastatic focal infection, perhaps because the streptococci have the ability to change in their selective affinities, morphology and cultural characteristics, and in biologic reaction, even after their cultivations in an artificial medium.

It has been found that streptococcus may begin as a metastatic infection from chronic infection in deep pyorrhea pockets and alveolar abscesses. A number of diseases, such as neuritis, iritis, myositis, bursitis, phlebitis, ulcerative endocarditis, myocarditis, pericarditis, peritonitis, appendicitis, meningitis, nephritis, spinal myelitis, acute and chronic infectious arthritis, rheumatic fever, osteomyelitis, thyroditis, cellulitis, pneumonia, pleurisy, septicemia, erysipelas, gastric and duodenal ulcer and others, may result.

Without a doubt the various organs and tissues of the body are more or less constantly subjected to conditions that increase the susceptibility to infection, as exhaustion, trauma, interference with local blood supply, and local strain. By an otherwise normal individual such conditions may be tolerated, but they may possibly lead to a focal infection and a serious disease for those having chronic infections. This perhaps accounts for the existence of wide-spread systemic diseases in

many individuals having focal infection and its probable absence in others not having a similar focus.

What is the toxic effect of these foci of infection at the apex of a root or deep-seated pyorrhea pockets, which can in most cases be located so easily with a roentgenogram? An abscess located in the antrum region may drain into the antrum, causing the patient to think he has a cold, or, more seriously, the toxins may be absorbed by the blood stream, causing debilitating diseases, meningitis and serious mental fatigue.

CASE 1

A young woman, about 28 years old, married, and having two children, wore a full upper denture successfully and without discomfort to the mouth for seven years. She complained of frequent and severe headaches at times. Her trouble had been diagnosed as sinusitis and she had taken treatments to relieve the condition, which was thought to arise from the frontal sinuses. She was advised to have the mandibular teeth roentgenographed, and it was thought advisable to have the maxilla also roentgenographed for root fragments which might have been left when the teeth were extracted. However, when the films were developed, an inferior third molar was found impacted on the right side; a decided area of pathology was about the first molar; on the left side of the mandible there was an impacted tooth with the crown resembling a molar but the root appearing more the shape of a bicuspid; the second bicuspid was missing; the lamina dura was destroyed about the first bicuspid by the presence of the impacted tooth; the first molar, with an extensive amalgam restoration, was pulpless and the mesial root showed quite an area of pathology.

The films of the maxilla revealed the presence of a well-formed central, two laterals and a cuspid neatly hidden away under the floor of the naris and maxilla. These were removed, the patient recovering rapidly, and she apparently has had no trouble with headaches, sinusitis or neuritis since.

CASE 2

A man, 34 years of age, presented with the superior right first bicuspid and first and second molars in badly broken-down condition. These had previously been filled, but had been sadly neglected. A milky exudate was discharging from the right nostril. An examination of the maxillary antrum, after the extraction of the teeth, revealed considerable polypi and pus. The polypi were removed, the antrum was washed out with a mild antiseptic solution and treated periodically until repair was established.

Dr. A. M. Nodine reports that he has found that at the age of twenty-five 25 per cent of the human race have septic mouths, at

forty-five 90 per cent have septic mouths, and at fifty 100 per cent. It is well to note also in this connection that Dr. Wm. Osgood found that those who have their teeth removed between the ages of fifteen and twenty-five will live from eight to thirty years beyond the normal period of life for sound, healthy adults; 90 per cent who have teeth removed between twenty-five and fifty years of age will live from five to thirty-five years over the normal span of life; 66 per cent of those who have all teeth removed between the ages of ten and forty-five will live from eight to thirty years over the normal span of life.

In oral sepsis we find a source of systemic intoxication. However dormant and latent an abscess may be, it remains an insidious focus of infection until it is removed, for otherwise it will break the body resistance of its victim beyond repair.

Central Trust Building



President's Address Before the West Virginia State Dental Society*

By H. L. Satterfield, D.D.S., Fairmont, W. Va.

My administration as your President is rapidly coming to a close, and I am here to give an account of my stewardship and to advise with you as to the state of the Society, to tender back to you this high office with which I have been honored and to thank you for the wonderful opportunity I have enjoyed in this service.

It is just a year ago since I stood upon a rostrum similar to this and received from you a gift. In all humility I accepted the presidency of this Society. It was not the honor of the office, though there be none greater, nor was it so much the friendship that touched me so deeply. It was not pride in achievement that stirred my very soul. It was none of these, as wonderful as they may be. The emotion I experienced vibrating every responsive chord in my heart was the opportunity of *SERVING*. And as the responsibility of this opportunity to serve flashed through my mind, I wondered if I could measure up to the task. After this flash of the immensity of the task just ahead, there came stealing over me, like some superhuman guiding hand, a feeling of the love and friendship of more than three hundred men in this State who were backing me to the limit. Then I made one resolve—that I would give every effort. Today I appear before you and simply state, "I have done my best."

I believe that it is customary for the President's address to cover the progress made during the year. However, in view of the fact that our several committees will present such a complete report, it will be my purpose to speak of other matters. The real progress in dentistry began when men came together in convention to study and discuss the various subjects presented. It is undeniably true that man never has and never will accomplish as much individually as in groups. This we know to be true in every walk of life. The individual may have plans and ideas, but unless they are presented to a group where they are discussed and enlarged, of what benefit are they to the majority? If we live to ourselves, we are inevitably inclined to a narrow view of life, we magnify our own importance and place too much stress on our own point of view. It is when we encounter the opinions of others that we are brought to realize the significance of man's true relationship to his fellow men or our own proper and normal status in the affairs of the world.

The advantages gained by attendance at gatherings of State or

* Delivered at the Twentieth Annual Meeting, Clarksburg, W. Va., May 17, 1926.

National societies should not be considered only for the benefits derived by the profession itself; in the broadest sense, the chief benefit of these meetings reverts to the public at large, through the better performance of dental service. There should be no element of selfishness in our society work.

ORGANIZATION

Organization has done more to command the respect to which we are entitled than any individual alone could hope to accomplish. Our organization should be so large that there can be no question as to whether we represent the majority. There is but one way to accomplish this, namely, by organized effort. Let me illustrate this point with a story. A colored boy was driving an ox team along the road one day. He had as a fellow-passenger a white man, who observed that the boy was very efficient with the long black-snake whip which he carried. Presently the boy saw a ground squirrel running on the fence near by and, with a couple of swings of the whip over his head, very deftly snapped off the squirrel's head. Farther along the road, with skillful precision, he picked a horsefly off the fence with the same weapon. The white man, having observed his skill as a marksman, then said: "Sam, take a crack at that," pointing to a hornets' nest. Sam grinned and replied: "No suh, no suh, boss, dem fellahs am organized." So it is with men who come together in organization—they have power and command respect.

Members of the West Virginia State Dental Society, for your information and a no doubt regrettable fact to us all, there are nearly 700 registered dentists in our fair State, and less than 50% of this number are members of our Society. Where lies the fault? Collectively or individually is it ours? Where shall we place the blame? Are we of the selfish or "holier than thou" type that we want this organization for a specially selected few? Or do we wish to remember that we are still "our brother's keeper." Suppose that we take it upon ourselves, first as individuals and then as an organization, to get rid of the old closed-corporation idea and endeavor to interest each and every eligible ethical man in the State to become members of the West Virginia State Dental Society. Let us now adopt the slogan, "Watch us grow," and let each one of us constitute himself a committee of one to interest each and every man in his particular community and also rejuvenate members who have become dilatory and have ceased to function as a member should.

Therefore, let us now resolve that we shall grow bigger and better so that by this time next year we may represent the majority rather than the minority, and that instead of having two delegates to our National body we shall have six or seven.

PREVENTIVE DENTISTRY

The old saying, "An ounce of prevention is worth a pound of cure," is only too true, but let us paraphrase and say, "Tis better to prevent than cure." We are all aware of the fact that the greatest advancement made in the past twenty years in the way of preventive procedure is attributed chiefly to our profession. Is it not true that in the above-named period of time the pendulum has swung from one extreme to the other—first mechanically, in the making of beautiful mechanical restorations, giving very little thought to pathological conditions; then to the other side, with wonderfully skilled surgical interference?

Today finds us about to arrive at center and establish a happy medium that is workable to either side for the mutual benefit of mankind. Do not misunderstand me—I am not condemning mechanical or surgical dentistry, for both are quite indispensable and always will be. It is gratifying, however, to know that the percentage of both can and will be cut down very materially in succeeding generations, provided the manner of means we have adopted continues to grow, namely, the education of the laity along the lines of oral hygiene, dietetics, etc.

Our Oral Hygiene Committee has done a wonderful and noble work in the past several years, and we must not allow this work to cease. I would heartily recommend to this body here today the establishment of what might be called a *Dental Health Week*, whereby exhibits and preventive demonstrations could be given in every school within the borders of our State.

ETHICS

It would sometimes seem as if dentists had forgotten that there is supposed to be a line of demarcation between the practice of a profession and the pursuit of a commercial calling. We have a written code of ethics, which states more or less specifically just what a dentist may or may not do if he wishes to attain to professional status. Every man who joins a dental society subscribes to this code and is supposed to abide by its provisions. But this is not always done to the exact letter, because dentists are human the same as other people and therefore are subject to the same limitations. Some of them err through lack of discriminating judgment, while a few deliberately err through a perverted idea of their obligation. They sail as closely as they can to the precise wording of the code without the slightest regard for the spirit of the code. These men are not constructively uplifting the profession, but are passively disintegrating it. A profession is judged by the impression made by its members upon the world.

A direct violation of the letter of the code is not the only means

of bringing the profession into disrepute. In fact, the most subtle undermining of true professionalism is found in those practices which are not amenable to disciplinary treatment upon the part of dental society officials.

Any exploitation of the people whereby they are imposed upon or misled through misrepresentation of facts, or whereby their fears are played upon to extort money without justification, is as truly unethical as are display advertisements in the daily press, and yet there is nothing in the written code to meet these cases specifically.

To play upon the credulity or ignorance of patients to their detriment, whether financial or physical, is as direct a violation of ethical principles as can be imagined, but no one article in the code seems to cover this point. It is impossible so to word the code that it will incorporate every conceivable abuse, and there is much that in the very nature of things must be left to the individual honor of the one who subscribes to the code. After all, ethical conduct is a matter of personal conscience, and yet the written code has done a great good in acting as a guide.

Professional men should hold themselves above any commercial tendencies. If we are to obtain to our full stature in the professional world, we must consecrate ourselves again and again to the observance of such principles as are embodied in the spirit, as well as the letter, of the ethical code, and we must so live our professional lives that our example before men shall mark us as worthy of the respect, and even the veneration, of those with whom we come in contact. In no other way shall we maintain a true professional status or come fully into the splendid heritage left us by the fathers of organized dentistry.

LEGISLATION

The various States enact legislation to govern the practice of dentistry within their borders, and this is their fundamental right, as provided in the Constitution. But the practical application of this principle works a very serious hardship on many very excellent men. In this statement I refer to a man who is licensed in one State and, having practiced there a number of years, becomes desirous of locating in another State. He finds that he can not do so, due to an almost insurmountable State Board examination which he is compelled to take, both in theory and practice, the latter being no handicap, but the former being made as if he were considered an undesirable.

I hope the time is not far distant when we shall have national dental reciprocity. The law of general average will take care of locations. Since it is true that law could just as easily be made to give privileges as to take them away, why would it not be worth while for certain laws to say that a citizen has a definite right and privilege, in

some circumstances, which cannot be interfered with? One of these very definite privileges might be the privilege of uniform dental examinations. Another could be the provision that any person bringing a damage suit against a professional man should be required to post a valid bond covering all attorney's fees and expenses in case the damage suit were lost, so that the victorious defendant would not be burdened by a lot of unmerited expense. As it is now, damage suits may be brought against professional men without the slightest grounds for action, and there is no recourse for the man who is attacked.

Provision should also be made, especially in States having compensation laws, to recognize the status of the dentist, as it does the physician, in cases coming under his control. Also, there should be recognition and better representation on all State boards of health; and, too, the recognition and authority for dentists to make diagnoses and sign death certificates. . . .

DELINQUENT MEMBERS

In every large organization in which membership is maintained through the payment of annual dues, there is usually quite a leakage from delinquent members. This is not so much a matter of financial inability on the part of the delinquents as one of forgetfulness, indifference or carelessness. Sometimes it is due purely to procrastination. Whatever the cause, it behooves the officers of every component society to check up on this matter very carefully and try to prevent such unwarranted loss of members. We are all fully aware of the fact that no organization can be run successfully without money and, indeed, it does seem that the first important step to take is for us to pay our dues regularly when notified.

CONCLUSION

In closing, I would recommend to the Society the consideration of dental legislation, named previously; also, ways and means of creating greater activities in work of the Society, thereby increasing our membership; again, the appointing of a committee to make a general survey throughout the State, determining definitely organized and unorganized territory, and to suggest what can be done for the good of the Society as a whole; also, the establishment of what might be called *Dental Health Week* along preventive lines.

Thanking you again for the honor bestowed upon me and the opportunity given me to serve, I close with a little poem, entitled "Keep A-goin'":

Ef you strike a thorn or rose,
Keep a-goin'!
Ef it hails or ef it snows,
Keep a-goin'!

'Tain't no use to set an' whine
When the fish ain't on yer line;
Bait yer hook an' keep on tryin',
Keep a-goin'!

S'pose you're out o' every dime
Bein' so ain't any *crime*,
Tell the world you're feelin' prime—
Keep a-goin'!

When it looks like all is up,
Keep a-goin'!
Drain the sweetness from the cup,
Keep a-goin'!

See the wild birds on the wing;
Hear the bells that sweetly ring;
When you feel like sighin', *sing*!
Keep a-goin'!



A Patient Who Could Not Eat In Central Occlusion

By E. S. Ulsaver, D.D.S., New Rochelle, N. Y.

The patient was a woman about fifty years of age. I took the impression and bite for a full upper and lower in the usual way. The patient gave a protruded bite, which was not recognized as such. The teeth were set up to this bite and put in the mouth. She immediately went back to central occlusion as a rest position and could not close the front teeth together.

When it was seen that these teeth had been arranged to a protruded bite, a new bite was taken, central occlusion was established, and the teeth were set up for that position. She insisted that she could not eat in that position. As a dentist, I, of course, knew more than she did about what she wanted or ought to want or needed. And that meant that she ought to be able to eat in central occlusion or to want to be able to do it. She kept making efforts to return to the protruded position in order to eat. This dislodged the dentures more or less and kept the mouth sore.

Finally I put wax on the occlusal surfaces of the teeth in the manner shown me by Dr. House and let her bite up and down in the position in which she felt comfortable. This established a protruded bite. Then I mounted the dentures in the articulator in the relation shown by that protruded bite and ground the teeth in with emery to articulate without interference in this relation. This did not entirely destroy the forms of the occlusal surfaces, but made passageways for the opposing cusps.

When this patient is not eating, she rests with the mandible in central occlusion. When eating, she protrudes to the other relation and masticates there.

The effort to find satisfactory relations in this case occupied at least three months, during which time I made several plates. The patient and I worked upon the case until we were both discouraged and finally, at her suggestion, I did as she asked me to in the first place and gave her the protruded bite. Now she has such comfort and efficiency as is probably possible in her case—a flat mouth, without ridges.

Professional Bldg.

Mouth Hygiene

By Charles R. Colbert, D.D.S., Johnstown, Pa.
School Dentist

It is said that the basis of general practice is operative dentistry, just as the administration of drugs is the basis of the practice of medicine. The purpose of operative dentistry is to care for the patient's teeth, starting in childhood whenever possible. The dean of one of our best dental schools declares that the general practitioner can make most of our specialties unnecessary.

Dentistry is essentially a health problem. The education of the public and of the profession itself, along with the developing of men for research work in dentistry, is the hope of the future for the dental profession.

WORK DONE IN OUR CITY SCHOOLS

The dental work done in our city schools is valuable not only because of the work itself, but also because of the changed attitude of the children and their parents which results. The children deserve more and better dental care than they receive either in the home or from the profession, especially in the home.

In order to maintain a sanitary or healthy mouth, a child or, for that matter, any one should receive:

1. Thorough prophylaxis.
2. Checking up on the use of dentifrice.
3. Instruction in methods of brushing the teeth.
4. Frequent examinations.
5. Work as needed.

PREVENTION

Mouth hygiene must be sold to the public. To a large degree the abstract idea of prevention is being sold to the public, but the concrete evidence of healthy mouth condition is being left in the background. You will all agree that you would prefer to do work in a healthy or clean mouth, and that you can do better work in this kind of mouth, than in an unclean one.

In the schools we are developing or selling the preventive side of dentistry in the way that is best at the present time, that is, by contact with the children and not by a hit-or-miss proposition. Each year we advance a little farther in this work.

In other words, you can have a dental health week every year, which may be put on most religiously, but if there is not a follow-up contact from some source, the whole idea goes for naught. The schools are doing their part by keeping in contact with the children, by con-

stant instruction, frequent examinations, etc. If a professional fee were to be placed on the dental work being accomplished through our school system, it would be of no small amount.

SCHOOL DENTIST

The school dentist is primarily responsible for the supervision of all the activities of the dental health department, including the work of the dental hygienists, and the enforcement of the rules and regulations. The principals, teachers and school nurses cooperate with him. If a child is financially able, he is sent or referred to his family dentist; if not, he is referred to the school dentist.

ORAL HYGIENE

Under my direct supervision there are now four dental hygienists and the coming year I expect to have eight dental hygienists to carry out our program. The medical phase of the school work is carried on under the supervision of a physician and nine graduate nurses. Each hygienist is fully equipped with a portable unit and a complete hygienist's equipment. They are sent from building to building, covering the first five grades of the schools. There is usually a spare room in each building where the equipment is set up and there the children are taken from their rooms and given attention. Every child receives prophylactic treatment, whether or not he can afford it, and as many additional treatments as the individual case requires. The dental hygienist tries to impress upon the child, even while giving him attention, through a general conversation, what he or she should do and should not do, and how, when and where.

The dental hygienists also make posters of various kinds, which are very well understood by the child, as well as drawings of teeth in an exaggerated form with an attractive color scheme, which give the child a better idea of what it is all about. They also lecture to the children as a class, giving health talks, toothbrush drills, etc. All children have at least three health talks a year from our department in addition to some from the medical department.

Every child who needs dental attention is given a dental notification, which he takes home to his parents, asking them to see that he is given dental care. As stated before, children whose parents cannot actually afford to pay, receive free dental work. If the parents cannot afford to send their child to the dentist, they are required to fill out an application which we supply. It inquires into their home conditions, such as income, number in the family, whether they own their home, how much rent they pay, etc. This is investigated by our school nurses and, if recommended, the child is admitted to our dental clinic for free dental work. All this has been made possible by our Board of Educa-

tion. Our local dental society has carried out some charitable phases in community work by supplying needy children with toothbrushes.

STATISTICS

Statistics are often passed by because so much nowadays is illustrated by figures, diagrams, percentages, etc., but there are some statistics in our work that ought not to be passed by. These statistics are the result of the taking of dental stock of the school children, our future citizens, on whom we shall all have to depend for our livelihood.

We are living in an industrial town and the following statistics will give an idea of existing conditions. There is no question but that with the continuance of our work these conditions will be greatly improved.

1. No. children in 1st to 5th grades last year, over	6,600
2. No. children given prophylactic treatment....	4,281
(Some received as many as three treatments, according to conditions.)	
3. No. parents notified to have dental work done on their children.....	3,610
4. No. children received at the clinic.....	461
5. Percentage from 8-11 years old who had never had dental attention.....	92%
6. Percentage from 11-14 years old who had never had dental attention.....	82%
7. Percentage of normal children having defective teeth	30%-65%
8. No. children sanitary or healthy out of every 1,000	50
9. No. healthy mouths out of 6,600 in first five grades	32
10. No. healthy mouths out of 12,000, the enrolment in the schools last year.....	240
11. Percentage of children not having toothbrushes (In many families the same brush is used by all or some of the members.)	69%
12. No. toothbrushes purchased by the children..	2,494
(I was able to secure these for ten cents each—a very good brush, too.)	
13. Ranking of nationalities in order of the condition of the teeth: (1) Italian; (2) Negro; (3) American; (4) Slav; (5) Polish.	
14. Average condition of children's teeth as a whole	Poor
15. No. defective teeth reported last year by our school nurses	3,479
16. Average no. prophylactic treatments a day....	43

CONCLUSION

Conditions as they really exist would be unknown were it not for this work in the schools. There is plenty of work to be done there. When you consider the purpose of this work, that the pupils in the first five grades are being greatly benefited by it and that the health education of the junior and senior high schools is continuing the educational work in oral hygiene, you can readily see the great values that may accrue.

609 U. S. Bank Building.

Classification of Edentulous Cases

Notes from a Clinic Given by

F. M. Hight, D.D.S., Houston, Texas

I prefer a patient who has had much trouble with plates, even if he has a bad mouth, to a patient who has a bad mouth and has never worn dentures. If a patient presents a history of trouble with dentures and the dentures are at all well made, I use radiographs or anything else that will help to find any conditions which might keep me from succeeding. The mental classification of patients has never done much for me.

When making a diagnosis for edentulous cases, I consider the relation of the ridges to each other the most important point. More dentures are ruined through unfavorable leverage than by any other cause. Such leverage results from unfavorable relation of the ridges to each other. Such relations of the ridges often cause traumatic occlusion where the ridges are small and flat and have to be separated a great distance on account of loss of bone, and for esthetics, and where they are malposed.

Secondly, I look at the shape of the ridges. I prefer a case in which the lower ridge is of uniform shape, half round from buccal to lingual. I like to have the upper ridge with more or less perpendicular side walls on the buccal. Then I take into consideration the form of the vault, the size and the shape of the tongue and the location, direction and strength of the muscle attachment. When the vault is flat and narrow, there are unfavorably situated muscle attachments to deal with.

If the ridges are covered with a thin, drawn tissue, there will be trouble. A thick, resilient tissue is favorable.

The size of the arches is not a deciding factor. Small arches may present favorable conditions, and very large ones may present unfavorable conditions, partly because of the difficulty of taking good impressions.

Bankers Mortgage Bldg.

Togo's "Discursions"

Mr. Editor of Magazine Making Dentistry Digestible

Hon. Sir:

Month of November entirely composed of melancholy days of Autumn and high mortality rate in Poultry Precincts, denotes fact that Hon. Pilgrim Fathers considered occasion of first square meal occurring in new location bounded by hostile Atlantic ocean on East and still more hostile Red Men on West, of importance demanding continuous commemoration by Annual Holiday denoting Thanksgiving for blessings as enumerated.

Attitude and behavior of Human Animals in presence of food is absorbing study, Mr. Editor, and importance of better understanding of food subjects in all branches should be daily concern of all dentists and other etc. who have charge of food production, distribution, preparation, ingestion and elimination.

Among scientists just indicated in foregoing sentence Dentists occur as important link in groups mentioned, having entire charge of machinery of food ingestion after first two years of life have been successfully liquidated.

"Our Teeth—Their Importance, How to Use, Care for and Appreciate Them When Present" is ponderous and thoughtful volume not yet produced by Japanese or any other brains, but should offer presently as brain child of Dentist who also enjoyed some experience as Human Being showing slight traces of subacute mentality. Such volume when issued may perhaps make following observations including others of less importance.

1. Early years of life often contain toothache as integral part of daily experience in unfortunate childhood. Amazing frequency of evidences of such sad state in cases of backward and peevish children often noted by observers having brains of ordinary horse-power capable of doing so. Correction of dental defects in early years often causes stubborn and unruly child of second or third grade mentality to become class historian or Captain of aggressive football team when college days arrive with astonishing suddenness.

2. Hon. Magician capable of instantly removing thruout U. S. A. territory all subsequent end products connected with early decay and loss of first permanent molar would immediately restore vast quantity of human energy capable of paying complete War Debt and all installments now due on overripe Fords and other Household etc.

3. Approximal decay attacking molars and bicuspid during tender years of stamp collecting, ukelele playing and other misfortunes causes tremendous loss of productive energy in later life impossible to compute on adequate World basis.

4. Final collapse of face due to complete withdrawal of teeth from countenance is tragedy of vanished attractiveness exceeded only by elimination of nose or presence of uninhabited eye sockets.

5. Toothsome morsels similar to crusty bread, juicy steaks, celery, nuts and etc. require pressures of noticeable intensity from 75 to 125 lbs. to be prepared for automatic machinery involved in digestion. Best complete sets of artificial chewers exert reluctant pressures of 10 to 25 lbs. in most instances. Every boy of entirely rural ancestry in U. S. A. has cracked assorted nuts occurring in rock-bound New England and elsewhere with unaided teeth furnished by Nature as part of bodily equipment. Dentists who could equip patient with artificial chewers of such sufficient horse-power could obtain fees of \$10,000.00 per each set capable of so doing.

Police blotters of all great cities denote sad presence of unfortunate crime wave but in entire record no mention of anyone suffering severe bites resembling loss of ear, nose or other facial decoration as result of ferocious attack by fiend in human form equipped with latest model high pressure denture is set down or even hinted at.

6. Facts heretofore enumerated are entirely true in every respect and should be carefully considered by all people having rational teeth, but are they? "Only slightly" is answer from all members present. Hon. Public still maintains polite anesthesia of intellect when considering possible personal catastrophe of loss of teeth during peak years of Life Adventure. "How come?" is pertinent question occurring to Japanese brains now engaged in considerable thought on allied subject. Literature of all peoples possessing one contains basic statements regarding "toothless old age." Ideas broadcast for generations have become automatic function of all individual brain machinery, which therefore thinks "Eventually, why not now" when confronted with problem of tooth loss or large tooth expense.

Arms, legs, ears, nose are listed in all catalogs as integral parts of Human Chassis, whereas teeth figure in minds of Public as Extra Equipment, not carrying full guarantee issued on balance of Human Machine.

Further unfortunate fact is high percentage of Dentists sharing similar mental astigmatism while regarding said problem from inherited angle of General Indifference rather than with focused understanding resulting from combination of Professional training and logical mental functioning.

Patient confronted with abhorrent proposition of having Hon. leg amputated slightly below knee will incur expense involving all available assets rather than do so. Same patient confronted with problem of losing Hon. Teeth remarks, "How unfortunate!" "When can slight operation of removal be performed?" "Teeth worn by Hon. Aunt

Jennie last 27 years have appearance of some naturalness and have never given slightest trouble." Thank you!

When receiving applesauce similar to foregoing does Average Dentist explode with voluble torrent of corrective information? Does he fix helpless prejudice victim with steady eye lighted by inner fires of definite understanding? Does he explain to patient that loss of leg is only slight physical handicap when compared to large assortment of grief installed by Dentist with every outfit of completely artificial teeth?

Sad fact to be incorporated in honest record is, "Mostly he does not." Mostly he follows well advertised line of least resistance cheerfully agreeing with deluded patient that blue-white, undersized porcelain horrors disfiguring face of Aunt Jennie are complete success in every detail.

Hoping you are the same,

Togo.



Dentist or Rhinologist?*

By Boyd S. Gardner, D.D.S., Mayo Clinic, Rochester, Minn.

In the Dental Department of the Mayo Clinic we believe that work which it is necessary for us to do on the antrum should be done in cooperation with the nose and throat sections. We like to pass the antrum work on to the nose and throat men because we do not always get satisfactory results.

When the patient presents with a fistula from the mouth to the antrum, our first task is to find out from the nose and throat department whether it is of malignant or traumatic origin. Cases sometimes present with such fistulae filled with different forms of plugs which dentists have made to keep the fistula open. The difficulty is not to keep it open—the hard work is to close it. If it has been open for a long time, the fistula is completely lined with squamous epithelium from the mouth and it is likely to prove stubborn because it does not secrete as it formerly did. In such cases the only thing to do is to cut it out with a knife and get rid of all the membrane in the hole.

A flap should then be cut from the hard palate, moved over the opening and sewed in position. Do not try to close such an opening with tissue from the buccal side of the ridge, because it is not thick enough and is not the kind of tissue that should be used for such a purpose, and the operation may interfere with prosthetic work.

If, in the course of extracting a tooth, I make an opening in the antrum, I do not touch it. It is important to make sure that all roots are out—but stay out of the antrum! Close the opening with the flap in the manner just described, then make sure that there is a good opening from the antrum into the nose, so that the congestion which has been caused will drain naturally from the antrum into the nose. If the opening into the nose is not large enough, have the nose and throat man enlarge it. We do not find it necessary to do as much operating on the antrum as we used to.

Antrum work should be confined to operators who are both well trained and experienced. The first time an untrained dentist opens into the antrum he is likely to find something which he thinks is pathological but which may be normal. There may be a cloudiness of the antrum, or there may be some mucus, because the opening on one side into the nose is not quite sufficient, but neither condition necessarily indicates an operation. Experience, judgment and special skill are required in this field; it is out of the field of the dentist, as I see it. In any case, it is just as well to pass along to the specially trained man something that will not do you much good if you do succeed and may be the source of much trouble.

*Summary of remarks at a clinic given before the First District Dental Society, New York, October 4, 1926.

Practising Dentistry in Mexico*

By Herman Kull, D.D.S., Mexico City

It is hardly possible to write about the practice of dentistry in Mexico without first acquainting the reader a little with this country of tradition, romance and beauty, of strange contrasts and incomprehensible contradictions.

There is perhaps no country on earth where, as here, age-old customs and habits keep side by side with the latest achievements of modern inventions. Should you venture to ask why such antiquated ways are still being followed precisely as they were centuries ago, you will invariably receive the answer, "P rque es costumbre" (because it is the custom).

Take the City of Mexico, for example. It has a well regulated tramway service, with the finest street-cars of the latest models. Yet you need to drive only to the nearest suburb to have a rickety, old, dinky little car take you to its outskirts, over uneven rails, propelled by a "two-horse-power" pair of mules, whose galloping, clattering hoofs, pounding upon uneven cobblestones, resound against the walls of houses built in the times of the Conquistadores or against walls hiding from view a magnificently laid-out private park. Still you enjoy the ride for its very quaintness and the picturesqueness of the old street.

You can, if your fancy pleases you, still hire one of those coaches of yore, drawn by two emaciated, hungry-looking horses, though taxis of all varieties, from the powerful seven-passenger to the rattling "Henry," are plentiful and cheap. On the fine asphalt pavements of the beautiful boulevards and avenues you still perceive now and then, among the long row of luxurious limousines and other high-powered cars, a graceful pair of trotters pulling an elegant victoria.

Huge moving vans and trucks have not been able to put out of business the *cargadores*, who carry on their backs unbelievably heavy boxes, trunks and pieces of furniture or, among four of them, a piano on their shoulders.

Against the silk gown of Parisian cut and make of the many elegant ladies may brush the cheap cotton dress of a barefoot squaw, with long skirt and perhaps the point of a carelessly worn *reboso* (shawl) trailing along the dusty sidewalk. Truly, this is a democratic country!

No city of less than 50,000 inhabitants, unless it be one of the few industrial or mining centers, can for any length of time support an American dentist. The percentage of the people who would and

*The prices given in this article are in Mexican pesos. One peso is equal to 50 cents in American money.

could pay only an approximate fee for good, exacting work is too small to allow him even a comfortable income, without considering the inconveniences and unaccustomed modes of living to which one is subject in the smaller places.

To build up a successful practice in Mexico, one of the first requisites, if not the first, is to be *un hombre simpático* (an amiable man). That means that not only must you soon avail yourself of a fairly good knowledge of Spanish, but it is well to learn some of the more colorful expressions of this poetic language. This is especially true if you practise in the interior, where your own countrymen as patients are few and far between. Courtesy in words and flourishing mannerisms not only are an inborn part of the cultured, but reach down to the humblest Indian, reminding one of customs carried into the twentieth century from the times of the viceroys.

To show how important it is to be most courteous and amiable to the people here, let me cite the following example:

Shortly after I had begun practice in Oaxaca, an American friend of mine told me of a conversation he had with one of my casual acquaintances. He had just met that gentleman, who told him that I was a "fine dentist." "Oh, yes?" said my friend, "and did you have some work done by him?" "Oh, no," was the prompt reply, "but I just had a chat with him."

Those of us who were born in Europe and have there come in contact with the Gallics and the Latins perhaps understand the character and traits of the Mexicans, but, coming down here from the hustle and bustle of the good old U. S. A., we are at first prone to use the brisk American language and mannerisms and thus are apt to hurt unintentionally many a good man's or woman's tender feelings. Another reason why you should learn to understand the very spirit of their language is because you might speak an insult instead of a pleasantry.

You must also accustom yourself to the shaking of hands, for you attend to that little ceremony each time you meet your patient as well as when he leaves your office. It is also well, after you get more intimately acquainted with some of your men patients, to embrace them and slap their backs with a few friendly taps, should you by chance meet them on the street after a long absence from town.

It seems a silly custom, this embracing of man and man, and yet it has its picturesque and truly emotional moments. When one of my friends, a general of the revolutionary army of the 1923-1924 upheavals, entered Oaxaca after a four or five days' march from Puebla, where his troops had been sorely defeated, stopped his cavalcade of about a thousand men, dismounted and put his arms about me, glad perhaps to see in my smiling face the true welcome of one whom, for disinter-

estedness in his political affairs, he knew he could fully trust, how could I then refuse him the heartfelt greeting he expected to receive from me? For the same reason, could I withhold a demonstration of my gladness in seeing another friend of mine who, as general of the government troops, had gone through many months of hazardous campaigning and had returned to reestablish peace and order in the suffering city? They were both my friends, though fighting on opposite sides, but I, as a foreigner, took no interest in their political affairs, for that is prohibited by law, which is only right.

To remain for many years in any city or town of Mexico, outside the capital, means invariably to get into a rut professionally, if not mentally, and morally, too, if you are not very careful of yourself.

True, you may be able now and then to attend a National Convention or take a postgraduate course, but when you come back to the old town, you find that all that fine and newly gained knowledge is of little or no avail to you. As long as you work anywhere in the interior, you will not make use of it.

Surely you would not make a three-quarter or an all-cast crown for \$15.00, rarely \$20.00. More often it would be at an average of \$12.00, and the price of hard golds comes to only a fraction less than the last-named amount. For the same reason you cannot make any kind of removable work which requires cast clasps or gold saddles, no matter how greatly indicated it may be or how much you "itch" to do it. You cannot make a bridge with porcelain pontics on the facings, or a jacket crown for that price, either, because, if you should invest in the purchase of a furnace, you often run the risk of the electric plant not working. In most cases they cannot, and in many cases they will not, pay your price. Unfortunately with the Mexican it is always, and in all things, price first and quality last.

Every city and town of some importance has its Mexican dentists, most of them apprentices of men who had apprenticed with some one who had been there before them. Of course, the American dentist will usually receive a fee of from 50% to 100% higher than they and, at that, get the bulk of the business from the upper and moneyed classes, but if you try to explain that for work before-mentioned you must get a fee double or treble that which you ask for ordinary two-piece crown-work, etc., they will walk out of your office. No power of reasoning will convince them that you really wish to give them better service, and that you are not trying to "do" them.

You cannot, in justice to yourself—and you must always be just to yourself as well as to your patient—give a mandibular injection for an extraction for which you get but two dollars. And since we talk of extractions, I think the place to get experience in that line of operations is Mexico. The osseous construction of the Indian's anatomy

seems often that of iron rather than of bone. The Indian, as a rule, has fine teeth and, if they do decay, he usually lets them go the way of complete destruction, necessitating removal. Often I can gain access to enormous roots of inferior molars only after cutting away a goodly portion of unyielding plates of alveolus of that massive jaw. No root forceps nor skilfully applied elevators can even loosen those deeply imbedded fragments, which appear like knots in a piece of hard wood.

I can attribute this massive bone construction, combined with a sturdy build of body and remarkable endurance for long marches through difficult country in wind and weather, only to a frugal diet rich in protein and lime, consisting principally of cooked, dried, brown or black beans and *tortillas*. The latter is a dry, flat pancake, made of white corn flour.

Many Indians like to pride themselves on a "gold tooth" showing in a conspicuous place. I have talked them out of that notion when I could, and I suppose they just went then to the "other fellow."

But what can you do about it, if a big bandit chief, with two guns and a long knife adorning his cartridge-studded belt, comes stalking into town and orders you to put a gold crown on his left superior incisor? You just give him the pleasantest of smiles and with the greatest courtesy tell him immediately to "please be so kind as to take a seat in the chair" and without delay go to work, making it as easy as possible for him, for his one hand is steadily fingering the gun lying on his lap—whether just because he is nervous or because he does not want to be hurt, you don't know. A week later, from the train, we saw his corpse dangling on a rope from a telephone pole and I thought to myself, "I am glad that fellow paid me cash." This sounds cruel, but it is the only way this government, which strives for law and order, can eventually, for the greater part at least, rid this country of banditry.

Would you, for esthetic reasons, feel conscience-stricken because you made one of Pancho Villa's soldiers happy by replacing all his knocked-out superior incisors with gold teeth? He was a bugler and could not perform the duties of his office, for lack of those teeth would not let him blow his horn. Nothing else would do but *dientes de oro macizo* (teeth of solid gold). His *Jefe* (chief), with whose generalship I later had the "honor" to dine at the same banquet table, had ordered him not to see the Mexican dentist but to go to the American dentist for his work.

Practising in parts away from railroad communication incurs many difficulties and inconveniences. With some of them I have made the readers of THE DENTAL DIGEST acquainted in my article, *Experiences of a Dentist in Tropical Mexico*, published in this year's Vacation Number (June, 1926).

You must stock yourself for many months with plaster, teeth, gold,

anesthetics, etc. Packing and unpacking the hundred and one things numberless times is only a part of the many troubles you have on your hands. In the tropics, where ice is rarely available, the wax will not keep its shape, for even thick candles often bend from the excessive heat. Water has to be hauled daily, often from distant brooks and rivulets, and is kept in empty alcohol cans and big earthenware jars.

Let us return to the capital, the Mecca of this country, where all Mexicans long to be and all who can will live some day. It is the only cosmopolitan city in Mexico, and the only place where you can give the best of your professional skill, because there commodities and the appreciation of at least the greater part of your patronage enable you to do so.

Gante 11.



The Better Dentistry Meeting

FIRST DISTRICT DENTAL SOCIETY, NEW YORK

The Better Dentistry (December) Meeting of the First District Dental Society of New York will be held on December 6, 7, 8, 1926, at the Hotel Pennsylvania, New York. This meeting will be a fitting successor to the Better Dentistry Meeting of 1925, which demonstrated conclusively the demand which exists in the metropolitan area for this type of meeting.

The meeting will exemplify the best in the dentistry of today, presented in such manner that each dentist who attends may learn something which will be helpful in his practice.

Among the more prominent of the essayists will be Dr. Rupert E. Hall of Chicago, Dr. Edward Hatton of Chicago, and Dr. Russell Hayden of Kansas City. An Oral Hygiene luncheon will be held on Wednesday, December 8th.

UNEXCELLED CLINICS WILL BE PRESENTED, ILLUSTRATIVE OF ALL PHASES OF PRACTICE

Topic discussions also, which were found so valuable last year, will be on the program.

The meeting will be conducted on the same professional plan as the meeting of last year. There will be no manufacturers' exhibit.

THE PLACE—HOTEL PENNSYLVANIA, NEW YORK, N. Y.

THE TIME—DECEMBER 6, 7, 8, 1926.

DENTAL LAWS

Summary of Dental License Requirements Throughout the World

By Alphonso Irwin, D.D.S., Camden, N. J.

SPITZBERGEN

This is a mountainous group of islands in the Arctic Ocean, 370 miles north of Norway, with an area of about 25,000 square miles, a population of 1500, the resort of whalers and some summer visitors. In 1919 Spitzbergen was "put under the flag of Norway." Consequently the Norwegian Medico-Dental regulations are operative. Consult Norway for these regulations.

STRAITS SETTLEMENTS

The Dental Board of this district has had under consideration the general question of the recognition of foreign diplomas in dentistry, as entitling their holders to register as dentists in the Straits Settlements under the Registration of Dentists' Ordinance, No. 13.

The relevant section of the ordinance is as follows:

5. Subject to the other provisions of this ordinance the following persons, and no others, shall be entitled to registration under this ordinance:

(a) Any person who holds a degree or diploma of any examining body in the British Empire, or in any foreign country that is recognized by the General Medical Council of Great Britain and Ireland as registrable in the Dental Register; and

(b) Any person who holds a degree or diploma of any examining body which may from time to time be recognized by the Dental Board as entitling the holder thereof to registration under this ordinance.

The Dental Board has decided that in future no foreign diploma, with the exception of those registrable in Great Britain, shall be recognized as entitling its holder to register as a dentist in the Straits Settlements, unless it is declared registrable by special resolution of the Board.

The Dental Board is chiefly comprised of the professors and doctors of King Edward VII College of Medicine, Singapore.

For further information correspond directly with the Honorable Secretary of the Dental Board, King Edward VII College of Medicine, Singapore.

Verified February 12th, 1926.

SUCRE

Part of Bolivia, South America. Consult Bolivia for the Dental License Requirements.

SUDAN

The Sudan, Africa, is divisible into three parts—namely, Anglo-Egyptian, British, and French Sudan. No recent official information has been obtainable. Unofficial reports indicate that missionary dentists would prove useful, especially if they also possessed a medical education. British, Egyptian or French credentials, according to the part located in, would prove most acceptable amongst the white and civilized population.

SUMATRA

This is an island of the Dutch East Indies possessing remarkable resources. Consult Holland and the Netherlands for the colonial dental license regulations. Licenses must be obtained in Holland.

SURINAM

Surinam, or Dutch Guiana, is situated on the north coast of South America, possessing vast and undeveloped natural resources. Consult Holland.

SWAZILAND

A British colonial country, southeast of the Transvaal in South Africa. Consult the colonial regulations of the British Empire. No direct information (official) obtainable yet from this region.

SWEDEN

A Swedish graduation as dentist is necessary in order to obtain license to practise dentistry in Sweden. This graduation is made at "Tanklakareinstitutet" (Dental Institute). The by-laws for this institution have been established by His Royal Majesty on September 22, 1899 (Swedish Collection of Statutes No. 69 of the year 1899). Certain paragraphs have later been changed, the latest having taken place on May 30, 1924 (Swedish Collection of Statutes No. 194 of the year 1924). The Dental Institute is of the same standing as other High Schools and is ruling under the Chancellor of Universities. Its organization and instruction given will be found in the by-laws.

His Royal Majesty the King is the head authority on dental matters; matters concerning instruction and graduation passing through the Department of Education, and matters concerning practice passing through the Department of Social Affaires. Before His Royal Majesty decides matters pertaining to dentists the opinion of the Council of Teachers of the Dental Institute is obtained; in matters pertaining to instruction the opinion of the Chancellor of Universities is obtained; and in matters pertaining to the practice of dentistry the opinion of the Medical Board is obtained.

A person who has been graduated as a dentist at a foreign generally recognized Dental Institute may, owing to the King's permission, practise dentistry in Sweden on the conditions that he become a Swedish citizen and passes through a Swedish graduation for dentists. The time of studies may in such a case be curtailed following an investigation by the Council of Teachers. In very exceptional cases a prominent foreign scientist may, after having obtained permission from the King practise dentistry without obtaining a Swedish graduation as dentist. We have the above information from Council of Teachers.

(Signed) J. Akerman.

We also have the latest dental law of Sweden in the official language of that country, which may be examined at our office by anyone interested.

Verified June 13th, 1926.

SWITZERLAND

In order to ascertain the license regulations in Switzerland we forwarded the following questions:

Through what schools is it necessary to pass to obtain authority to practise dentistry in Switzerland? (A) Through no school; but it is necessary to pass an examining board either in Zurich, Basel, Geneva, Berne or Lausanne. It is necessary to have the "Maturitaet" and "Propedenticum" before being permitted to hear lectures and clinics at the university. At these there is no examination, excepting in Geneva; but a certificate of attendance is issued, and this certificate entitles the holder to an examination by one of the federal boards (above).

Before whom are the examinations held, both cantonal and federal authorities? (A) Only federal, except Geneva.

If an examination has been passed before the federal board and a diploma is granted, does this carry with it the authority to practise in any canton in Switzerland without any further examination? (A) Yes.

Is the practice of dentistry controlled by the cantonal authorities,

each for themselves, or is there a federal law or control upon the subject? (A) The practice is controlled by the cantonal authorities.

What procedure is necessary in order to enable an American dentist to practise as an assistant to a recognized practitioner? (A) Differs in different cantons.

Is it necessary that he should speak any special language or must he present a diploma from any special American college? (A) Language is immaterial, and no American college is especially recognized (vide cantonal laws).

In the event of the absence of the principal from any cause, would the assistant be allowed to carry on the practice for an indefinite period, or is a certain length of time provided for? (A) In most of the cantonal laws, no provision is made for this eventuality. In the canton of Zurich one year is allowed.

How many recognized American practitioners are there in Switzerland? (A) There are 327 dentists in Switzerland, and about 50 to 75 "American dentists" among them, but only four Americans.

How many assistants? (A) Impossible to ascertain, but to my knowledge two Americans.

How many practitioners and assistants calling themselves "American dentists" are practising here? (A) About 8 in 100 practitioners.

Is it the general practice for them to style themselves "American dentists" without having passed an examination at an American dental college? (A) No; formerly some men had "fake diplomas", bought in America and elsewhere, but they were prosecuted.

What are the usual charges of American dentists in Switzerland, and how do they compare with the charges made at home?

Examination	\$1.00 to \$3.00
Plastic fillings	2.00 to 5.00
Nerve treatment, per sitting.....	1.00 to 2.00
Gold fillings	5.00 to 20.00
Crowns	each 15.00 to 40.00
Bridge work, per tooth	15.00 to 30.00

These average charges are higher than those of most first-class dentists in America.

In your opinion does Switzerland present a good field for a bright American dentist who would like to spend a few years abroad, or is the profession already overcrowded here? (A) There is always room at the top of the ladder, and Switzerland is not any more overcrowded than America. An American who wishes to spend a few years here can only do so by becoming an assistant to some good dentist.

In the Cantons of Glarus and Appenzell-am-Rhodes anybody is permitted to practise all branches of medicine without a diploma, and

in the Canton of Geneva anyone having passed the dental examination at the University of Geneva is given a diploma which entitles him to practise in that Canton only.

From the information received it will be seen that the theoretical knowledge required of a graduate in dentistry compares favorably with the requirements in the United States; but it is the general opinion of dentists capable of judging that the poorest American dental college teaches its students more of practical value than the best here, and dental schools on the Continent give their students only scant opportunity to become good gold fillers and crown and bridge workers.

It may also be said that the requirements of the Swiss laws and regulations are such that to become a regular recognized practitioner would not only be extremely difficult for a foreigner, but would consume far more time than anyone would care to give.

The question, however, of becoming an assistant to a recognized practitioner is worthy of consideration. From a careful review of the different cantonal laws I find that, while these differ in unessential points, none requires that an examination be passed by an assistant, and it is only a question of obtaining the consent of the local authorities, which is usually granted. It is not necessary that the applicant should speak any special language. Of such American assistants there are already a few in Switzerland, and the profits of the business are usually divided between the parties in interest according to the agreement between them.

The cities offering the best inducements would be Lucerne, Basel, Geneva, St. Gall, Lausanne, Berne and Fribourg.

We have the Swiss dental law received and operative in 1926 in the official language of that country. Anyone interested may read it upon calling at our office.

The name of the central recognized dental college is Ecole Dentaire, Rue De Lausanne, Geneva, Switzerland, from which other details may be ascertained by correspondence.

SYRIA

There are no laws which apply specifically to dentists as a class. Dentists are actually subject to the medical laws of this country, and in order to practise that profession the applicant must be in possession of a diploma, or pass an examination as outlined by the authorities.

In the event of a person of foreign nationality having a diploma from a foreign university he may practise (Turkey in Asia Minor includes Syria), provided the college is recognized by the Constantinople College of Dentistry. The diploma must then be legalized by the foregoing institution. According to the medical laws any graduate of a foreign medical college who may have his diploma legalized by the

Constantinople College of Dentistry must practise for two years in a place indicated by the Government.

Until approximately three years ago dentists were not considered in the same class as doctors in this country. Practically anyone could practise dentistry upon the accomplishment of a few formalities.

There is no American dentist practising in this city (Smyrna). Practically all the dentists are of Turkish nationality. The nearest dental school is the one located at Constantinople. Other advices afforded us show that the Dental Department of the American Protestant University in Beirut, Syria, is again in operation. It will be noted that the French mandate over Syria is not referred to, or the unsettled state of mind of the people mentioned.

Verified May 13th, 1925.



DENTAL ECONOMICS

"We Have Funds"

By M. L. Hayward, Hartland, N. B., Canada

"Take my check for that account of mine?" the Louisiana customer queried.

"On what bank?" the Louisiana dentist queried.

"It's on the Starlight Bank, and I've got funds to cover it."

"Any objection to my wiring the bank to see if it's good?"

"Not the slightest," the customer agreed, and the dentist sent a telegram describing the check.

"Is the check good?" the telegram asked.

"We have funds to pay check mentioned," the bank wired back.

"Not definite enough to suit me," the dentist demurred.

"Ask them to confirm it," the customer suggested, and the dentist wired again.

"Confirm your telegram that you will pay check," the second wire stated.

"This confirms our telegram that we have funds to pay check," the bank replied. The check went forward and was dishonored, so the dentist sued the bank in the Louisiana courts.

"Your telegram constitutes a certification of the check," the dentist contended.

"All we said was that we had funds, but there was no promise to pay," the bank retorted, and the court ruled in the bank's favor.

"These telegrams of the bank simply imparted the information that the balance of the drawer was sufficient to meet the check and did not import an acceptance of the check or promise to pay it. They seem to have been carefully worded for guarding against acceptance or promise to pay. In fact, the person who sent them testified that he took the wording from the code of the American Bankers' Association, where for saying exactly what was said in these telegrams the word 'lounging' is to be used, and for accepting or promising to pay a check the word 'lovebird' is to be used," said the Court in 91 *Southern*, 405.

PRACTICAL HINTS

This department is in charge of V. C. Smedley, D.D.S., and George R. Warner, M.D., D.D.S., 610 California Building, Denver, Colorado. To avoid unnecessary delay, Hints, Questions and Answers should be sent direct to them.

NOTE—Mention of proprietary articles by name in the text pages of the DENTAL DIGEST is contrary to the policy of the magazine. Contributions containing names of proprietary articles will be altered in accordance with this rule. This Department is conducted for readers of the DENTAL DIGEST, and the Editor has no time to answer communications "not for publication." Please enclose stamp if you desire a reply by letter.

Editor Practical Hints:

Here is a case on which I would like a little information. Female, 15 years. Upper left cuspid, discoloration extending down to pulp, which was exposed and bled quite freely. Tooth had never ached. Covered it over with Thymol Zinc temporarily. Do you think it a safe bet to cap the pulp and take the chance?

Also would like to know after what age it is not advisable to cap pulps? I have read somewhere that it is never safe to cap the pulps for adults. Would appreciate your experience.

O. F. B.

ANSWER.—The formula for the sedative cement which we use and recommend for pulp capping is Eugenic Acid, Thymol, Iodine, Oxide of zinc, Bismuth subnitrate. We were taught to cap pulps with Thymol and zinc oxide at the University of Pennsylvania when I was a student there about twenty years ago. It works quite satisfactorily and a fair proportion of pulps survive under it, but it has been our experience that a very much larger percentage will survive retaining their normal vitality indefinitely when capped with the above formula.

I do not think you are taking much chance of losing the pulp in this cuspid in the mouth of a vigorous young person, but if it were my case I would remove the thymol-zinc replacing it with the sedative cement at the earliest convenience.

We cap pulps at all ages of the patients with a very high percentage of satisfactory results, but, of course, proceed with greater confidence and assurance in the mouths of young, vigorous patients.—V. C. SMEDLEY.

Editor Practical Hints:

Am once more coming to you for advice or information in regard to cavity preparation for proximo-incisal inlays in the upper centrals and laterals. I have reference mostly to the type of teeth which are very thin labio-lingually. With the cuspids and the thicker or heavier centrals I generally resort to a lingual step, but as you know this cannot be done very well in the thinner type, due to accidental exposures and not enough body. Have sometimes used a short post of thin gauge, but this will show through the enamel in some cases.

Outside of exposure of gold I think this is the strongest type of restoration. Have never tried a synthetic restoration alone as I doubt very much it will stand the force of mastication when the incisal edge is involved, but, of course, I may be wrong. Have seen some but they were generally faulty.

Will appreciate giving me your technic, or sending me the name of a late book on this work.

A. H. H.

ANSWER.—The thin maxillary incisors are very hard to manage with any filling material, but if the incisal angle is involved gold alloyed with platinum is the material of choice. Silicates are contra-indicated and baked porcelain is apt to chip. It is our plan to get good anchorage on the lingual surface by a dovetail going as high gingivally as the singulum, and coming as far incisally as the bulk of dentine will permit. If the gold is alloyed with 4 per cent of platinum the incisal corner will stand the usual wear well.—GEO. R. WARNER.

Editor Practical Hints:

I have a little boy patient 3 years of age, whose upper centrals and laterals are badly decayed on all surfaces. I am afraid the pulps will soon become involved, though up to date he does not complain of them. Would you kindly suggest some way of saving them without having to remove the pulps.

The rest of his teeth are in fine shape. I am quite at a loss to know why these four should have become so bad.

R. B. D.

ANSWER.—Several applications of saturate solution of silver nitrate to these decayed surfaces will usually successfully arrest the progress of decay, thus permitting these deciduous teeth to remain in with vital pulps until time for their exfoliation. The pulps are so large and the

dentine so thin in these deciduous incisors that it is almost impossible to secure adequate retention for any kind of fillings.—V. C. SMEDLEY.

Editor Practical Hints:

Have a case, male patient, 50 years old. Teeth extracted about one year.

Fitted with vulcanite denture; fit is perfect, and he also handles them perfectly, but complains that a taste he gets from the plates gives him pain in chest, so much so that he has to discard the plates.

Any information or help you may give me on this will be appreciated.

L. E. M.

ANSWER.—I can only suggest that you would be less apt to have any such difficulty under a gold plate, and I think it possible that a nerve pressure is causing his sensation of an objectionable taste. You might first try radically cutting out over the entire foraminae and nerve distribution areas. If this does not make any difference, later try the gold plate.—V. C. SMEDLEY.

Editor Practical Hints:

Wonder if you would let me know your technique for treating pyorrhea? What agents are you finding to give the most satisfactory results, following thorough scaling and polishing?

G. G. A.

ANSWER.—I can most briefly tell you of the technique I use in treating pyorrhea by saying that I use that which was taught by the late Dr. C. M. Carr, and is the same as is used and taught by Dr. Austin James of Chicago.

I am not a believer in medicinal agents or mouth washes in the treatment of this disease. I think if a thorough scaling and polishing is done and the occlusion is adjusted to relieve all traumatism and the patient does his part at home, that nature will do the rest.—GEO. R. WARNER.

Editor Practical Hints:

I have noticed lately several cases where the incisal third of upper incisors has changed to a yellow color and seems to be progressing towards the gingival. Is this a case of receding pulp or pulp becoming devitalized? A lateral in one mouth in which the centrals are discoloring has been a dark yellow for fifteen years, since a small amount

of orthodontia was done. Radiograph shows the root canal to be entirely closed.

Can you tell me the cause of the change in color? Is there anything that can be done to check same?

H. W. G.

ANSWER.—A small proportion of teeth which have been under orthodontic treatment change color, due to a calcification of the pulp chamber and canal, and with the pulp chamber and canal entirely filled in with secondary dentine the tooth changes color in about the same degree as it would were the pulp removed. Whether these teeth are vital or not I cannot say; they do not respond to thermal shock nor to the electrical test. The peridontal membrane is usually unchanged around the apex and this is ordinarily no change in the lamina dura, so they are evidently safe so far as being a focus of infection is concerned. I know of no way to stop this change in color.—Geo. R. WARNER.



DENTAL SECRETARIES and ASSISTANTS

Secretaries' Questionnaire

All questions and communications should be addressed to Elsie Pierce, care of THE DENTAL DIGEST, 220 West 42nd Street, New York City.

NOTE—HAVE YOU A BETTER WAY? HAVE YOU A TIME-SAVING SHORT CUT? DO YOU KNOW A "STUNT" THAT LIGHTENS THE WORK OR MAKES FOR EFFICIENCY IN THE OFFICE? IF SO, WRITE TO ELSIE PIERCE, CARE THE DENTAL DIGEST, 220 WEST 42ND ST., NEW YORK. YOU MAY HELP A NUMBER OF GIRLS WHO ARE JUST BEGINNERS—AND YOU KNOW HOW YOU NEEDED HELP DURING YOUR FIRST FEW MONTHS IN A DENTAL OFFICE. OR IF YOU NEED HELP NOW WRITE TO ELSIE PIERCE—SHE'LL HELP YOU.

I know that every dental assistant has experienced the annoyance of having to "clean up" the operating room following the taking of a plaster impression by the doctor. Small particles of the plaster drop to the floor and have to be swept up and the floor wiped with a wet mop where they have been stepped on and ground in. Very often particles adhere to the clothing of the patients and are scattered about the office, to say nothing of the displeasure to the patient. The cleaning up takes time and delays the next patient when the doctor has only one operating room. I have found a solution to this problem which I am glad to pass along.

After having adjusted the napkin or towel about the neck of the patient, fold the lower part of the napkin or towel up and over for a sufficient distance to form a pocket and fasten it together at the edges with paper clips or pins. Be sure that the portion forming this pocket is arranged so as to remain open to catch the plaster particles. This is done by placing the edge of the fold about an inch and a half inside the edge of the under part of the napkin.

I. D., Ill.

My doctor had a patient in the office today who could not have the x-ray film placed in her mouth without severe gagging and retching. What do you suggest to help this condition?

C. B., Md.

Try wrapping the film in tissue paper. If this does not help, prepare a two per cent solution of either novocain or cocain and give the patient two or three tablespoonfuls in a wine glass, instructing her to gargle and rinse the mouth with it, but cautioning her not to swallow any of the solution.

A glass full of ice water used as a gargle and to rinse the mouth will very often accomplish the same results, although ice water is often very distressing to patients with sensitive teeth.

The suggestions above for a gargle and rinsing the mouth can be used also when patients gag and retch under the ordeal of impression-taking.

May I state that I had the misfortune of spilling quite a bit of iodine on my uniform, and found that after placing a soft piece of material under the spot, and using a liberal amount of alcohol, it was removed very satisfactorily. One must also use plenty of "elbow grease."

I am enclosing two pamphlets advertising schools for dental assistants which give instruction by correspondence. A young lady asked for information regarding a school for dental assistants in the September issue of *THE DENTAL DIGEST*.

L. K., Cal.

We appreciate your suggestion for the removal of iodine stains from linen, also the pamphlets advertising the schools for dental assistants.

Personally I believe that in order to receive the proper training in any professional calling, that training should be secured in departments affiliated with schools that are a part of a university or college recognized by the educational authorities and licensed to give such professional education. Education by correspondence has a value, however. Anyone taking up a professional study should have direct contact with the lectures and discussions as well as the clinical demonstrations that are a part of this training.

I am an assistant in an office where we have a number of children as patients. Our reception room has a good-sized alcove which the doctor permitted me to fix up as a "kiddie corner." In this I have a low table and several small chairs; pictures of interest to children, books with linen covers for the wee tots, and several juvenile magazines for the older ones. We also have a counting frame with bright-colored markers for the tiny tads and a box of puzzles for the older boys and

girls, and every now and then I add something new to the toys and pastimes. The one piece of furniture which the visitors, big and small, like best is our blackboard, which is placed on an easel and can be raised or lowered to fit the size of the user.

If you have no room in your office for a "kiddie corner" and have small visitors, find enough space for a blackboard. You have no idea how it keeps the children interested and out of mischief, especially the wee tots that mother must bring along to the dentist because she has no one with whom to leave them. Incidentally, if the doctor has an outline to make for a patient, showing tooth forms, etc., the blackboard will come in very handy.

A. E., Philadelphia.

October Meeting

OF

THE EDUCATIONAL AND EFFICIENCY SOCIETY FOR DENTAL ASSISTANTS,
FIRST DISTRICT, NEW YORK, INC.

The Educational and Efficiency Society for Dental Assistants, New York, resumed its activities at the meeting held at the Academy of Medicine, 17 West 43rd Street, New York, on Tuesday, October 5, 1926. Following the usual procedure, a chairman of the evening was appointed by the President, Juliette A. Southard, and Jean Tallaksen, Acting Director of the Clinic Club, presided.

The essayist of the evening was Dr. John Jacob Posner, Visiting Dental Surgeon of St. Luke's Hospital, New York, whose subject was *Old World Wanderings of an American Dentist*. Dr. Posner's address was delightfully interesting, filled with ready wit, and illustrated with lantern slides. Mrs. Ogden, the second speaker, told of the direct relationship that the proper selection of clothes bears to good appearance and offered many helpful hints in the choice of style and color. Mae L. Bennett and Robina McMurdo, delegates from the Society to the second annual meeting of the American Dental Assistants Association at Philadelphia in August last, presented their reports of the meeting, telling of the scope of work and the various activities represented there. Jean Tallaksen, who was also a delegate to that meeting, spoke of the wonderful inspiration the sessions afforded and of the splendid spirit of cooperation and enthusiasm manifested by the attending dental assistants and visiting members of the dental profession. The Educational and Efficiency Society for Dental Assistants, New York, is honored in that its President, Juliette A. Southard, was reelected

President of the national organization; Maude Sharpe, member of the Executive Committee, was elected General Secretary; and Agnes F. MacNeil, Vice-President, and Agnes H. Phillips were elected to the Board of Trustees.

It was announced that in addition to the classes conducted in the past by the Society there will be given lectures on telephone courtesy and a trip through a telephone exchange; lectures on the selection of teeth, with an explanation on how teeth are made, the law of harmony of face forms and tooth forms; on accounting, with a visit to one of the large banking institutions; and demonstrations on the care of equipment. These classes are free of charge to members of the Society, and applications may be addressed to Mae L. Bennett, Director, 104 East 40th Street, New York.

The Librarian, Anna Neulinger, announced the addition of a large number of articles on subjects of interest to the dental assistant in her work. She has also compiled a scrapbook to contain clippings and articles relating to dental assisting, methods of procedure, and the history of the dental profession and dental equipment. She emphasized the fact that the articles are for the use of the members and urged them to cooperate with her. She may be addressed at 535 West 110th Street, New York.

Dr. Henry Fowler, First Honorary Member of the Society, spoke a few words, commending the members on past successes and encouraging them to continue to strive for greater achievements.

The regular meetings of the Society are held on the second Tuesday evening of each month, October to May, inclusive. At the November meeting, Holmes C. Jackson, Ph.D., Dean of the Dental School and Assistant Dean of the Medical School, New York University, will be one of the speakers. Mrs. L. R. Welzmilller, Deputy Commissioner of Markets, will speak on Economics for Womanhood. A cordial invitation is extended to the members of the dental profession, and dental assistants are urged to join. The Society offers many opportunities to share in the advantages arising from association and cooperation toward a mutual goal, that of raising the standard of education for the dental assistant and increasing her efficiency in the service she renders to the dental profession and those whom they serve. Martha Keit, Chairman of the Membership Committee, will be glad to furnish further details. Communications will reach her at 32 Court Street, Brooklyn, N. Y.



Educational and Efficiency Clinic Club

The Educational and Efficiency Clinic Club opened the 1926-1927 season with a most enthusiastic meeting on September 27, 1926, at the office of Dr. A. Goldwater, 576 Fifth Avenue, New York. Several invitations to present clinics had been received and the main topics of discussion were the plans for those to be given before the First District Dental Society of New York at the December meeting at the Hotel Pennsylvania on Wednesday, December 8, 1926, and before the Kings County Dental Society on January 13, 1927. Jean Tallaksen, Acting Director, read a synopsis of several methods of sterilization—by steam, by boiling, by chemicals—and in the general discussion that followed many new points in regard to sterilization and assistance at the chair were brought out.

It is in this manner—through an interchange of ideas by the members of the Club through general discussion at meetings—that one aim of the Clinic Club is achieved, that of searching out new and efficient ways to aid the dental assistant in the performance of her daily work. It is also the purpose of the Club to arrange and conduct clinics which demonstrate the duties of the capable dental assistant and the possibilities for her service in the dental office. To expedite demonstration, the work of the assistant to the dentist has been analyzed and divided into sections: Secretarial Assistance, which shows the various methods of bookkeeping, filing, charts, courtesy cards, telephone courtesy, and reception room courtesy; Chair Assistance, which explains the care of the patient, first aid, preparation for operative procedure, anesthesia (local and general), preparation of impression materials, and the making of accessories, such as gauze packs, wipes, sponges, etc., glove wraps, bibs, aprons, and headrest covers; Sterilization, which demonstrates the various methods of sterilization, care of handpieces and cutting-edge instruments, care of general equipment, etc.; Orthodontic Assistance, which shows the preparation of bands and models, care of charts and records, sterilization and care of appliances, special plaster bibs, and trays for drying impressions; Radiographic Assistance, which explains the preparation and care of solutions, the developing, mounting and filing of radiographs; Laboratory Assistance, which demonstrates the care of impressions, the pouring of casts, separation and articulation, boxing, model carving and wax carving, setting up of teeth, gold inlay casting, and staining of teeth. Thus each demonstration presents the duties in that particular phase of the work and the whole comprises the routine duties of one dental assistant. The Club has a splendid record of achievement, having presented successful clinics during the past four years in several states before na-

tional, state, and local societies of dentists and dental assistants. The plans for the coming year and the interest and enthusiasm manifested by the members of the Club give promise of further success.

The officers for the ensuing year are: Juliette A. Southard, Director; Jean Tallaksen, Acting Director; Anne Daum, Recording Secretary; and Anne Marvel, Corresponding Secretary. All members of the Educational and Efficiency Society for Dental Assistants, New York, are eligible for membership and are cordially invited to join. Membership in the Clinic Club affords the many advantages to be gained from the clinics and from the association with others engaged in an endeavor of mutual interest and entails no obligations other than earnest cooperation for the benefit of all in the effort toward the further education of the assistant to the dentist, so that she may be better fitted to render efficient service in the dental office.

The Club meets regularly on the third Monday evening of each month, September to May, inclusive. Applications for further information or membership may be addressed to Jean Tallaksen, Acting Director, 24 State Street, New York.





EXTRACTIONS



No Literature can have a long continuance if not diversified with humor—ADDISON

Don't worry too much to-day. Things may be worse to-morrow, and then you can worry twice as hard.

After wondering thousands of years how to fix her hair, women finally decided to cut it off.

All those who would like to see America cancel the European debt are requested to mail in their Liberty Bonds.

(Assistant)—You were a long time pulling that patient's tooth, doctor; was it a bad case?

(Dentist)—No, not particularly so, but that was the fellow who married the girl I loved.

A child having been told by his mother that if he did not stop eating pastry he would burst, replied courageously, "All right, mother; pass the cakes and get out of the way."

(Wife—greatly excited)—Oh, Walter, I've dropped my diamond ring off my finger and I can't find it anywhere!

(Husband)—Don't worry, my dear, I found it in my trousers pocket this morning.

Corner a doctor and he will admit that nature does most of the healing, but he is likely to add that a river never produced an electric current until an engineer took a hand in the matter.

TELLING THE TRUTH

"Some day we will tell the truth in death certificates," says London Life, "and the reports will be made out like this:

"Died after thirty years of overeating.

"Smothered to death; worked and slept in unventilated rooms.

"Killed by high living.

"Poisoned by his wife, who used wrong cooking methods."

Conan Doyle recently told the members of the famous Savage Club—referring to his association with the drama—that a young boy who was getting £2 a week in a play of his had once laughingly suggested that they should pool and divide their incomes for the rest of their lives. He refused the offer and had regretted it ever since. The boy was Charlie Chaplin.

Anyway, there's a lot of good people at the bottom of the ladder.

The son of the family had recently returned from his first ocean voyage.

"John," said his mother (who noticed that her son was doing nothing in particular) "do you feel like feeding the fishes?"

"Oh, no, mother, I feel perfectly well."

(Professor)—Note this quotation. "We have come to bury Caesar, not to praise him." Who said that?

(Student)—The local undertaker.

Seven countries are 6,480,000 gold francs behind in dues to the League of Nations, and if they don't pay up soon the House Committee may have to "post" them and deny them admittance to the billiard room.

After Mark Twain had finished his speech at a dinner, a lawyer arose, shoved his hands deep into his pockets, as was his habit, and inquired:

"Doesn't it strike the company as a little unusual that a professional humorist should be so funny?"

Twain came back with the drawing inquiry:

"Doesn't it strike this company as a little unusual that a lawyer should have his hands in his own pockets?"

Two Irishmen had just laid a wreath of flowers on a comrade's grave, and while crossing another section of the cemetery they saw a Jap lay some rice on the grave of a countryman.

One of the Irishmen asked: "When do you expect your friend to come and eat the rice?"

"When your friend comes to smell the flowers," was the quick reply.

WISE CRACKS

The flivver owner: "Wouldn't that jar you?"

The radio orator: "I'll tell the world."

The murderer: "Well, I'll be hanged."

The judge: "Fine."

The flapper: "No one has anything on me."

The telephone girl: "I got your number."

The sausage-maker: "Dog gone."

The fisherman: "I'll drop a line."

DIETETICS and HEALTH

The Mysterious Vitamins

Although most of us think we know just the right things to eat and drink, a quiet little talk with a nutrition expert easily makes us aware of the fact that what we don't know about the proper selection of food assumes very alarming proportions.

It was a nutrition expert (in an interview with a writer for "The Healthy Home") who spoke so interestingly about diet in general and vitamins in particular, that a brief summary of his talk might prove instructive.

"Nobody knows exactly what vitamins are," said this expert. "We are recognizing them by their effects. Experiments show that rats could not thrive if they were fed only on a well-proportioned diet of proteins, fats and carbohydrates in a pure form. In nature, rats and other animals feed not on chemically purified food, but on all sorts of animal and vegetable material, very far from pure chemically. Among the impurities there must be something necessary to the adequate maintenance of life. The something need be present only in minute quantities, as a few drops of raw milk, far too little to have nutritive value in the ordinary sense, added to the chemically pure rations, made all the difference to the rats.

"A combination of chemical work with subsequent experiments in feeding animals showed that there are two groups of vitamins. Some can dissolve in fats and some in water.

"The Fat Soluble Vitamins are called A, D and E. A is formed in green plants growing in the sun. D is formed in both animal and plant tissues under the influence of the ultra-violet rays. Both are needed for healthy growth. A has a general effect. D is specially concerned with the proper formation of the bones. In its absence a condition resembling rickets arises.

"Cod liver oil is the common substance richest in these two vitamins. A probably coming from the microscopic green plants of the sea eaten by the fish, D being formed directly in the tissues. The third fat-soluble, E, is also put together in plants under the influence of light; the best-known source of it at present is an oil extracted from

the sprouting germ of wheat, and has an unexplainably good effect when given to both children and adults who are out of condition.

"The Water Soluble Vitamins are called B and C and are a little better known, although there is as yet no clue to their real nature. We only know that neither man nor beast can thrive without them.

"B is most abundant in yeast extract, and its deficiency leads to a neuritic state of which the disease known as 'beri-beri' is an extreme example. Vitamin C is relatively abundant in orange juice, and its deficiency leads to scurvy.

"It does not follow that because a diet is varied enough vitamins are taken. Except in the case of E, about which least is known, it seems clear that the addition of cod-liver oil or fresh milk and butter, and also orange juice, will restore the vitamin content abundantly, even to the poorest diet.

"Not long ago there were opposing views about the treatment of children to secure healthy growth and to prevent rickets. One school insisted on proper diet, and advocated cod-liver oil as the supreme measure. The other school insisted on exercise, fresh air and sunlight. The discovery of the richness of cod-liver oil in fat-soluble vitamin and of the effect of the vitamin on growth seemed to give a conclusive victory to the diet school, and led to a very active campaign in favor of redressing all deficiencies in diet.

"But later the pendulum swung the other way. Children suffering from rickets were cured by exposure to sunlight or to ultra-violet rays from electric light. Those who were engaged in studying post-war malnutrition in Vienna proved that exposure to sunlight or to ultra-violet rays was efficient without the addition of vitamins to a meagre diet.

"The reconciliation of the opposing views came later, when it was found that a food mixture so deficient in vitamins that it produced rickets in animals could be endowed with curative properties by exposure to ultra-violet light. In other words, outdoors children exposed to sunlight do not suffer so much from an incomplete diet as do indoors children.

"And there you have an outline of what we now know," said the expert. "You should govern your family accordingly!"

Dr. Eliot's Rules for a Long Life

The late Dr. Charles W. Eliot, who lived to be 92 years old, vigorous and alert to the end of this long span, gave out, shortly before

his death, a few simple rules, observance of which had helped him keep fit:

"That I have borne much labor and responsibility without ever suffering even a temporary breakdown seems to me to be due—after the inheritance of a sound constitution—to my possessing a good muscular and nervous system, preserved by open-air exercise and the habit of moderate eating. It may have contributed to the fortunate result that at no time of my life have I ever made habitual use of any nerve stimulant like tea, coffee, tobacco or alcohol, although I have never been a total abstainer from any one of these stimulants except tobacco. When I have taken them it has always been in dilute forms."

The Danger in Salt!

Danger both to the mind and the body lurks in the salt cellar. So says Dr. Jean Bouchon, an eminent French surgeon.

In an article in the *Nouvelle Revue* Dr. Bouchon says salt is one of the worst of modern social poisons. Because of it surgeons constantly are operating for appendicitis, gastric ulcer and liver and renal calculus.

It atrophies, dries up or hardens muscular tissues and causes persons with tendencies to arthritis to become stout and those of lymphatic temperament to become thin.

According to Dr. Bouchon, salt also has a deleterious effect on the intelligence.

Trigeminal Neuralgia of Dental Origin

Chiappori analyzes the features which distinguish trigeminal neuralgia resulting from some unsuspected dental anomaly. In three cases described, removal of an unerupted wisdom tooth, or correction of pressure from false teeth, or removal of a fragment of a root broken off five years before, cured the neuralgia at one stroke.

A Word About Freud

When the Neurological Institute of New York was established in 1909, I had time, patience and patients to put the Freudian claims to the test of experience. For ten years I worked at it industriously, says Dr. Joseph Collins in "*Dearborn Independent*."

As the result of such experience, I say that as method of investigation it has value; as a trend in psychological research it is interesting.

It may be found to be of service in the field of pedagogy, pediatrics and education.

It has small value as a therapeutic measure in nervous and mental disorders of adults.

It is a dangerous weapon in the hand of any man or woman who is not fundamentally moral, basically honest, elementarily ethical and primarily high-minded.

I have seen many persons tremendously injured by it. I have seen only a few who have been benefited. It disintegrates character and degrades personality.

You and Your Bus

You know the Model of your Car.
You know just what its powers are.
You treat it with a deal of care,
Nor tax it more that it will bear.
But as to Self—that's different;
Your mechanism may be bent,
Your carbureter gone to grass,
Your engine just a rusty mass.
Your wheels may wobble and your cogs
Be handed over to the dogs.
And you skip and skid and slide
Without a thought of things inside.
What fools, indeed, we mortals are,
To lavish care upon a car,
With ne'er a bit of time to see
About our own machinery!

—John Kendrick Bangs.



FUTURE EVENTS

The regular monthly meeting of the NEW YORK STATE STOMATOLOGICAL-MEDICAL SOCIETY will be held in New York, N. Y., on Tuesday, November 23, 1926, at 8:30 p. m. at the Andrew Todd McClintock Foundation, 285 Madison Avenue. George Reese Satterlee, M.A., M.D., of New York will present a paper on *Further Studies in Dental Focal Infection in Relation to Internal Medicine*, which will be discussed by Edward E. Cornwall, M.D., F.A.C.P., Brooklyn, N. Y.; Thomas F. Reilly, M.D., New York, and Albert F. R. Andresen, M.D., Brooklyn, N. Y. Physicians and dentists are cordially invited to attend this meeting.

DR. ALFRED J. ASGIS, *General Secretary*,
East 168th Street and Walton Avenue, New York, N. Y.

The sixth annual Midwinter Convention of the UNION COUNTY (N. J.) DENTAL SOCIETY will be held December 1, 1926, at Elizabeth, N. J., at the Auditorium of the Elks Club, from ten in the morning until after the evening essay.

Dinner in honor of the President, Dr. Harry A. Paskow, will be served promptly at 6.30 p. m., in order that the essay of the evening may be given promptly at 8 o'clock. It is requested that dinner reservations be made through the Director. Practitioners of dental and medical organizations are cordially invited to attend.

Clinicians from the Clinical Club of the University of Maryland will present the program, as follows:

- 10 a. m. *Some Problems in the Extractions Presenting in the Every-Day Practice of the General Practitioner*, an operative clinic with ample opportunity to observe.....Horace M. Davis
 - 2 p. m. *Registering the Bite in Full Denture Construction*, with demonstrations on a series of models, and ample opportunity to ask questions,
Alex H. Paterson
 - 8.15 p. m. Essay, *The Demand for a National Board of Dental Examiners*, a very vital topic at the present time.....J. Ben Robinson, Dean
- Further information may be obtained from

DR. ARTHUR F. WOOLSEY, *Director*,
1162 East Jersey Street, Elizabeth, N. J.

THE BOARD OF DENTAL EXAMINERS OF CALIFORNIA will hold an examination in San Francisco for license to practise dentistry, on December 4, 1926.

O. E. JACKSON, *Secretary*,
155 Kentucky Street, Petaluma, Cal.

TESTIMONIAL BANQUET

To DR. GEORGE B. WINTER OF ST. LOUIS

THE ST. LOUIS DENTAL SOCIETY, one of the oldest in this country, will honor DR. GEORGE B. WINTER with a testimonial banquet on Monday evening, December 6, 1926, in recognition of his research work done on the impacted mandibular molar.

Address all communications to

DR. J. F. ALCORN, *President*,
Metropolitan Building, St. Louis, Mo.

THE STATE BOARD OF REGISTRATION AND EXAMINATION IN DENTISTRY OF NEW JERSEY will hold its regular examinations at Trenton, commencing December 6, 1926, and continuing for five days thereafter. The license fee is \$25.00; re-examination fee, \$10.00.

Practical tests required: Insertion of an approximal gold filling with the approximating tooth in position, compound approximal amalgam filling and a silicate filling, the candidate to furnish his own patient; taking of impression, bite, selection of teeth, articulation, trial plate, the candidate to furnish his own patient; practical examination in mouth diagnosis.

Attention is directed to the following quotation from the dental law of New Jersey: "Applicant shall present to said Board a certificate from the Commissioner of Education of this State, showing that before entering a dental college he or she had obtained an academic education consisting of a four-year course of study in an approved high school or the equivalent thereof."

In accordance with this law, the secretary will issue application blanks only upon presentation of the required certificate from the Commissioner of Education, State House, Trenton, New Jersey.

Application must be filed, complete, ten days before the date of the examinations.

Address all communications for further particulars to

JOHN C. FORSYTH, *Secretary*,
148 West State St., Trenton, N. J.

THE IOWA STATE BOARD OF DENTAL EXAMINERS will meet at the State University of Iowa, College of Dentistry, Iowa City, Iowa, on December 13-16, 1926, at 9 a. m., for the purpose of examining applicants for license to practise dentistry in Iowa. An examination for dental hygienists also will be given.

All papers and credentials must be filed with the State Department of Health at least fifteen (15) days prior to date of examination.

For further information and application blanks, address the State Department of Health, Capitol Building, Des Moines, Iowa.

THE MINNESOTA STATE BOARD OF DENTAL EXAMINERS will hold its next examination at the College of Dentistry, University of Minnesota, Minneapolis, December 13-18, 1926. Applications must be in the hands of the Secretary not later than December 1st.

F. E. COBB, *Secretary*,
601 Donaldson Building, Minneapolis, Minn.

The next meeting of the SOUTH DAKOTA BOARD OF DENTAL EXAMINERS will be held in Sioux Falls, South Dakota, beginning on Monday, January 3, 1927.

G. G. KIMBALL, *Secretary*,
Mitchell, S. D.

THE CHICAGO DENTAL SOCIETY announces its SIXTY-THIRD ANNUAL MEETING AND CLINIC at the Drake Hotel, Chicago, January 26-28, 1927. The meeting will again be divided into nine sections as follows:

Section I. *Operative Dentistry*. Chairman: Robt. E. Blackwell, 104 South Michigan Ave. Secretary: W. Ira Williams, 122 South Michigan Ave.

Section II. *Full Denture Prosthesis*. Chairman: G. M. Hambleton, 29 East Madison St. Secretary: John M. Besser, 30 North Michigan Ave.

Section III. *Partial Denture Prosthesis*. Chairman: Frank H. Vorhees, 25 East Washington St. Secretary: Milo G. Kral, 25 East Washington St.

Section IV. *Oral Surgery, Anesthesia and Diagnosis*. Chairman: C. F. B. Stowell, 25 East Washington St. Secretary: Joseph G. Wiedder, 25 East Washington St.

Section V. *Orthodontia*. Chairman: B. O. Sippy, 30 North Michigan Ave. Secretary: J. W. Ford, 25 East Washington St.

Section VI. *Periodontia*. Chairman: Edgar D. Coolidge, 25 East Washington St. Secretary: G. R. Lundquist, 104 South Michigan Ave.

Section VII. *Mouth Hygiene, Preventive Dentistry, Public Health and Educational Exhibits*. Chairman: Herbert E. Phillips, 5457 South Ashland Ave. Vice-Chairman: E. E. Graham, 58 East Washington St. Secretary: Harold S. Smith, 1010 Belmont Ave.

Section VIII. *Röntgenology*. Chairman: J. H. Prothero, 25 East Washington St. Secretary: Frank H. Bernard, 25 East Washington St.

Section IX. *Pathology, Materia Medica and Therapeutics*. Chairman: Edward H. Hatton, 31 West Lake St. Secretary: J. R. Blayney, 912 Galt Ave.

The slogan for this meeting is *Educational*. All subjects of vital importance to dentistry today will be covered by the best authorities in the country. Three half-days will be devoted to scientific papers and two half-days to clinics and lecture clinics. One evening will be given over to a joint meeting with the medical profession and on Thursday noon there will be a special feature luncheon. A banquet will be given on Thursday night in honor of the visiting State dental society and Canadian Province dental society presidents. The preliminary program will appear later.

Howard C. Miller has charge of Exhibits; Stanley Tylman, Clinics; Harris W. McClain, General Arrangements; Roy M. Wilson, Banquet; Victor H. Fuqua, Reception; Frank W. Booth, Transportation; Don M. Gallie, Jr., Ladies' Entertainments; Otto U. King, Program.

HUGO G. FISHER, *Secretary*,
25 East Washington Street, Chicago.

THE CONNECTICUT DENTAL COMMISSION will meet at Hartford, Connecticut, on November 16, 17, 18, 1926, to examine applicants for license to practice dentistry and dental hygiene and to transact any other business proper to come before them.

Attention of dental hygienists is called to Section 11 of the Connecticut Dental Laws, Chapter 2907 Amended, reading as follows: "From July 1, 1926, every dental

hygienist applying for a license shall present a certificate from the state board of education that she has completed a four years' course at an approved high school, or has an equivalent academic education. No license shall be issued to any dental hygienist unless she shall present a diploma or other certificate of graduation from some reputable institution."

For further information, apply to A. B. Holmes, Recorder, 43 Central Avenue, Waterbury, Connecticut.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS, OF AUGUST 24, 1912

OF THE DENTAL DIGEST
at New York, N. Y.
State of New York, } ss.:
County of New York, }

Published monthly
for October 1, 1926.

Before me, a Notary Public in and for the State and county aforesaid, personally appeared Seeley Vander Veer, who, having been duly sworn according to law, deposes and says that he is the Assistant Secretary of the Dentists' Supply Co. of New York, Publishers of THE DENTAL DIGEST, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 411, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

NAME OF	POST OFFICE ADDRESS
<i>Publisher, THE DENTISTS' SUPPLY Co. OF NEW YORK</i>	220 West 42nd St., New York, N. Y.
<i>Editor, GEORGE WOOD CLAPP</i>	New Rochelle, N. Y.
<i>Managing Editor, GEORGE WOOD CLAPP</i>	New Rochelle, N. Y.
<i>Business Manager, L. W. DUNHAM</i>	New Rochelle, N. Y.
2. That the owners are:	
THE DENTISTS' SUPPLY Co. OF NEW YORK	220 West 42nd St., New York, N. Y.
THE AMALGAMATED DENTAL COMPANY, LTD.	7 Swallow St., London, England
LEWIS L. FAWCETT	1347 Dean St., Brooklyn, N. Y.
LEROY FRANTZ	Davenport Neck, New Rochelle, N. Y.
GERTRUDE L. FRANTZ, Trustee for Horace G. Frantz	221 Cheyenne Rd., Colorado Springs, Colo.
GERTRUDE L. FRANTZ	221 Cheyenne Rd., Colorado Springs, Colo.
J. HAROLD FRANTZ	1709 North Nevada Ave., Colorado Springs, Colo.
VIOLA F. GOOD	45 Pintard Ave., New Rochelle, N. Y.
DEAN C. OSBORNE	839 St. Marks Ave., Brooklyn, N. Y.
SADE E. L. OSBORNE	839 St. Marks Ave., Brooklyn, N. Y.
JOHN R. SHEPPARD	155 Riverside Drive, New York, N. Y.
JOHN R. SHEPPARD, Trustee	220 West 42nd St., New York, N. Y.
RUTH A. P. SHEPPARD	155 Riverside Drive, New York, N. Y.
ETHEL E. TOMB	167 Lake Ave., Newton Centre, Mass.
GEORGE H. WHITELEY	905 S. George St., York, Pa.
IDA O. WHITELEY	905 S. George St., York, Pa.
GEORGE H. WHITELEY, JR.	121 W. Springettsbury Ave., York, Pa.
J. OSBORNE WHITELEY	905 S. Beaver St., York, Pa.
LILLIAN S. WHITELEY	905 S. Beaver St., York, Pa.

THE AMALGAMATED DENTAL COMPANY, LTD., is a corporation organized under the laws of England, with a nominal capital stock of £2,850,000, ownership of which is scattered over a considerable part of Europe and includes a long list of names unknown to us, and probably a number of banks and other corporations.

3. That the known bondholders, mortgages, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company, but also in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

THE DENTISTS' SUPPLY COMPANY OF NEW YORK,
SEELEY VANDER VEER, Asst. Sec'y.

Sworn to and subscribed before me this 27th day of September, 1926.

[SEAL]

EMELIE S. SCHOFF

Notary Public, Westchester County

Certificate filed in N. Y. County

Clerk's No. 565; Register's No. 7523—My commission expires March 30, 1927.